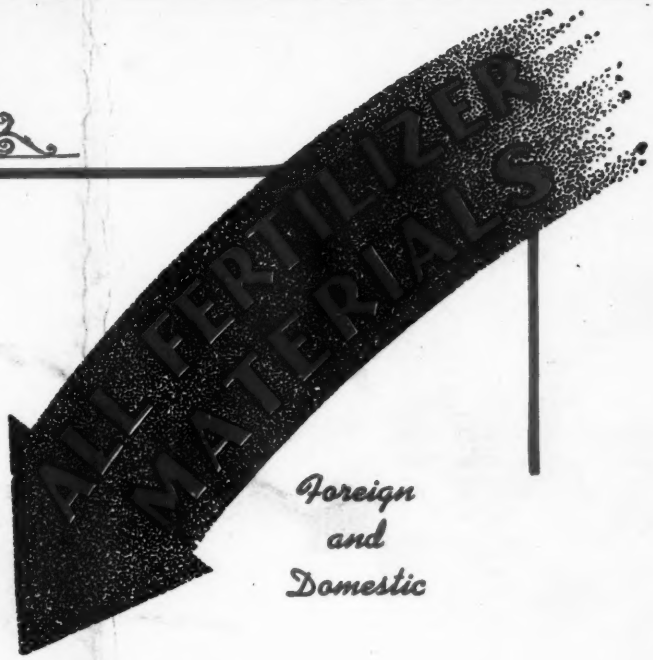
The American
FERTILIZER

A-W Co.



AMMONIUM NITRATE

SULPHATE of AMMONIA

ORGANIC AMMONIATES

SULPHUR

Foreign and Domestic

VEGETABLE OIL MEALS
AND
FEEDSTUFFS

Exclusive Distributors Duval Texas Sulphur

ASHCRAFT-WILKINSON CO.

Home Office
ATLANTA, GEORGIA

Branches
NORFOLK, VA.
CHARLESTON, S. C.
JACKSON, MISS.
TAMPA, FLA.

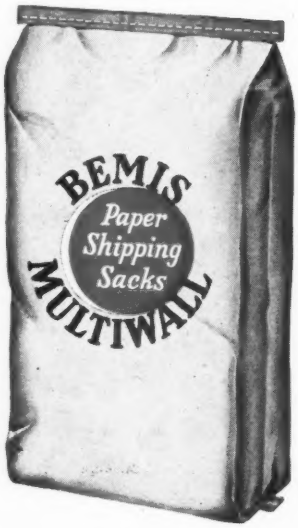
Cable Address
ASHCRAFT

Subsidiaries
INTERSTATE MILLS, INC.
CAIRO, ILL.
INTERSTATE WAREHOUSE
MOUNDS, ILL.

...TO GIVE YOU THE BEST IN MULTIWALL SERVICE

When you can't estimate your future Multiwall needs right on the button, it's handy to have a supplier near for prompt service.

With the facilities of seven Bemis Multiwall plants available through thirty-six sales offices across the country, you are in a much better position to keep your multiwall supply in line with your needs.



Bemis

"America's No. 1 Bag Maker"

COTTON · BURLAP · PAPER BAGS · BEMIS BRO BAG COMPANY · ESTABLISHED 1858

Peoria, Ill. • East Pepperell, Mass. • Mobile, Ala. • San Francisco, Calif. Vancouver, Wash. • Wilmington, Calif. • Houston, Texas

Baltimore • Boise • Boston • Brooklyn • Buffalo • Charlotte • Chicago • Cleveland • Denver • Detroit Indianapolis • Jacksonville, Fla. • Kansas City • Los Angeles • Louisville • Memphis • Minneapolis New Orleans • New York City • Norfolk • Oklahoma City • Omaha • Phoenix • Pittsburgh • St. Louis Salina • Salt Lake City • Seattle • Wichita

Publish ed every other Saturday. Annual subscription: in the United States, $3.00; Canada and Mexico, $4.00 other countri es, $5.00. Entered as second-class matter. January 15. 1910, at the Post Office at Philadelphia. Pa.. under Act of March 3, 1879. Registered in United States Patent Off ce. Publication off ce. 317 N. Broad St.. Phila. 7. Pa.

CONSERVATION...IRRIGATION...FERTILIZATION

In the sound application of these three measures lies agricultural America's best answer to the problem of supplying from a fixed land area the ever-increasing demands of a rising population having a rising standard of living.

Of the fertilizers so widely used today, many of the most effective are compounded with potash—often with Sunshine State Potash, a product of New Mexico, and an outstanding soil nutrient that protects crops against plant diseases and drought, and provides greater soil fertility.

HIGRADE MURIATE OF POTASH 62/63% K_2O
GRANULAR MURIATE OF POTASH 48/52% K_2O
MANURE SALTS 20% MIN. K_2O

SUNSHINE STATE POTASH A PRODUCT OF NEW MEXICO U.S.A.
Reg. U. S. Pat. Off.

UNITED STATES POTASH COMPANY, *Incorporated*, 30 Rockefeller Plaza, New York 20, N. Y.

A Complete Service

THE strategic factory locations of The American Agricultural Chemical Company, as shown on the accompanying map, assure prompt, dependable service for the complete line of products listed below.

We manufacture all grades of Commercial Fertilizers, Superphosphate, Agrinite Tankage, Bone Black, Bone Black Pigments (Cosmic Black), Bone Ash, Bone Oil, Dicalcium Phosphate, Monocalcium Phosphate, Gelatin, Agricultural Insecticides (including Pyrox, Arsenate of Lead, Calcium Arsenate, etc.), Trisodium and Disodium Phosphate, Phosphorus, Phosphoric Acid, Sulphuric Acid, Ammonium Carbonate, Ammonium Fluosilicate, Magnesium Fluosilicate, Potassium Fluosilicate, Phosphorus Pentasulphide, Phosphorus Sesquisulphide (lump), Zinc Fluosilicate, Salt Cake; and we are importers and/or dealers in Nitrate of Soda, Cyanamid, Potash Salts, Sulphate of Ammonia, Raw Bone Meal, Steamed Bone Meal, Sheep and Goat Manure, Fish and Blood. We mine and sell all grades of Florida Pebble Phosphate Rock.

FACTORIES

Alexandria, Va.	Cleveland, Ohio	No. Weymouth, Mass.
Baltimore, Md.	Detroit, Mich.	Pensacola, Fla.
Buffalo, N. Y.	Fulton, Ill.	Pierce, Fla.
Carteret, N. J.	Greensboro, N. C.	Port Hope, Ont., Can.
Cayce, S. C.	Havana, Cuba	Savannah, Ga.
Chambly Canton, Quebec, Can.	Henderson, N. C.	Searsport, Maine
	Montgomery, Ala.	South Amboy, N. J.
Charleston, S. C.	Nat. Stockyards, Ill.	Spartanburg, S. C.
Cincinnati, Ohio	Norfolk, Va.	

The AMERICAN AGRICULTURAL CHEMICAL Co.

50 Church Street, New York 7, N. Y.

SALES OFFICES

Alexandria, Va.	Clinton, Iowa	Laurel, Miss.	Pensacola, Fla.
Baltimore, Md.	Columbia, S. C.	Montgomery, Ala.	Pierce, Fla.
Buffalo, N. Y.	Detroit, Mich.	Montreal, Quebec, Can.	Port Hope, Ont., Can
Carteret, N. J.	Greensboro, N. C.	National Stockyards, Ill.	Savannah, Ga.
Charleston, S. C.	Havana, Cuba	New York, N. Y.	Spartanburg, S. C.
Cincinnati, Ohio	Henderson, N. C.	Norfolk, Va.	Wilmington, N. C.
Cleveland, Ohio	Houlton, Me.	No. Weymouth, Mass.	

Presenting

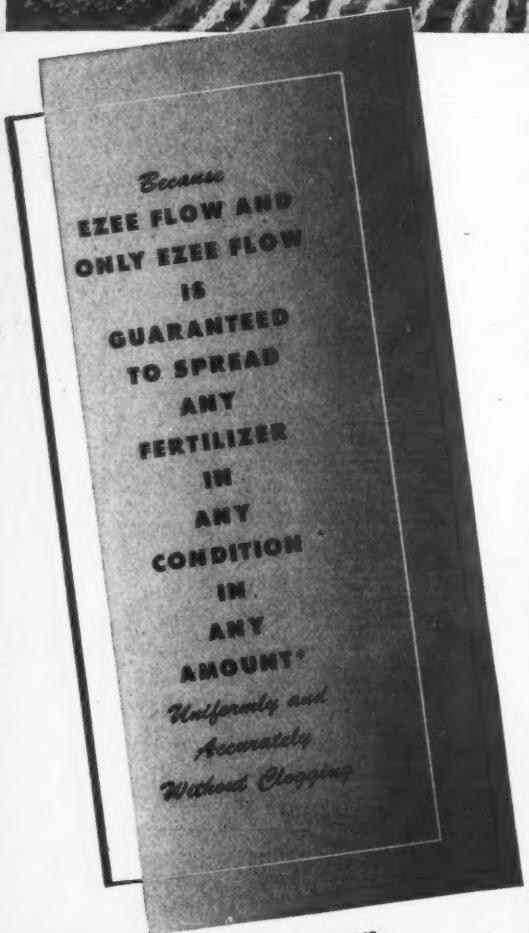
THE MOST MODERN BAG PRINTER

Manufactured in
One, Two, Three and Four Colors for printing made up bags of Paper, Cotton and Burlap, new or used.

Let us send you complete information with descriptive literature.

SCHMUTZ MFG. CO.
18th and Main Streets
Zone 3
Louisville, Ky.

Cable Address "SCHMUTZ"—Long Distance Phone CLAY 7771


Because
EZEE FLOW AND ONLY EZEE FLOW IS GUARANTEED TO SPREAD ANY FERTILIZER IN ANY CONDITION IN ANY AMOUNT*
Uniformly and Accurately Without Clogging

*10 to 4,000 lbs. per acre.

NEVER BEFORE SUCH *ECONOMY AND EFFICIENCY IN FERTILIZER APPLICATION*

The EZEE FLOW System of Fertilizer Application has been develope by years of research and constant, intensive study of fertilizer applic tion *needs*. We are proud to have developed equipment which succes ful farmers, leading agr. colleges, major fertilizer mfrs., top-rankin agronomists and soil specialists and nationally-famous soil conservatio workers acclaim "the finest in the field—years ahead of the industry"

WHY EZEE FLOW OUT-PERFORMS ANY MACHINE ON THE MARKET

Exclusive Cam Agitator and "positive control" shutter dial assures eve accurate spreading up to 20 acres per hour. Its multiple-purpose adjus ments and attachments permits changeover (in matter of minutes from broadcast spreading to row or band applications... surface depth placement from 2 to 6 inches. All over America—for cor cotton, pastures, orchards, truck crops—for *every* fertilizing need. EZEE DOES IT!... thus *increasing* fertilizer use, *improving* fertiliz results. Copyright, 1949, Power Production Company.

EZEE FLOW

Registered Trademark-Patents Pending

FERTILIZER APPLICATION EQUIPMENT

ILLUSTRATED LITERATURE gladly sent on request. Write to:

POWER PRODUCTION COMPANY, DEPT. AF-749
CHICAGO 3, ILL.

The American FERTILIZER

Vol. 111 JULY 9, 1949 No. 1

American Plant Food Council Convention

Fourth Annual Meeting held at Bretton Woods, N. H. with Large Attendance. Agronomists, Congressmen and 4-H Club Leaders Discuss Fertilizer and Farm Problems. Directors Elected.

Amid the scenic beauties of New Hampshire's White Mountains, the American Plant Food Council held its fourth annual convention on June 19th to 22nd, at the Mount Washington Hotel, Bretton Woods. The registration showed an attendance of more than 400, which included over 100 ladies who thoroughly enjoyed the program of entertainment which had been arranged for them.

In addition to meetings of the Board of Directors and other committees of the Council, two general sessions were held on Monday, June 20th and Tuesday, June 21st which were well attended and produced some valuable discussion on the problems of agriculture as they relate to the fertilizer industry. The feature of Monday's meeting was an agricultural panel on the subject of "Fertilizer, Farming and the Future" which was participated in by an agricultural editor, three state agronomists, a member of the House Agricultural Committee and one of the leading U. S. Department of Agriculture officials. The talks at the Tuesday meeting were by the dean of Cornell Agricultural College and two leading members of the National 4-H Clubs.

Election of Directors

The Council elected the following directors for the term ending June 30, 1952:

L. R. Gonzales, President, Ochoa Fertilizer Corp., Hato Rey, Puerto Rico.

J. A. Howell, Executive Vice President, Virginia-Carolina Chemical Corp., Richmond, Va.

W. Hampton Logan, President, Logan-Robinson Fertilizer Co., Charleston, S. C.

George E. Petitt, Vice President, Potash Company of America, New York, N. Y.

Ashmead Pringle, Jr., President, A. F. Pringle & Co., Charleston. S. C.

Walter S. Rupp, Vice President, Baugh & Sons Co., Baltimore, Md.

John E. Sanford, President, Armour Fertilizer Works, Atlanta, Ga.

Frank S. Washburn, Director, Agricultural Chemicals Division, American Cyanamid Co., New York, N. Y.

W. C. Stark, Secretary of the Atlantic Fertilizer Company, Riverhead, New York, was elected for a one-year term ending June 30, 1950 to fill the unexpired vacancy created by the death of G. W. Covington.

At a meeting of the new Board of Directors on the closing day of the Convention, President Clifton A. Woodrum and the other members of his staff were re-elected.

The Executive Committee for the coming year will be composed of J. A. Howell, Virginia-Carolina Chemical Corp.; A. F. Red, Lion Oil Co.; Robert C. Simms, Naco Fertilizer Co.; Paul Speer, United States Potash Co.; W. T. Wright, F. S. Royster Guano Co.; Fred J. Woods, Gulf Fertilizer Co.

It was announced that the 1950 Convention will be held at Hot Springs, Va. during the latter part of June.

Entertainment

The annual banquet on Tuesday evening was highlighted by an address by Representative Harold D. Cooly, chairman of the House Committee on Agriculture. Ample provision was made for the entertainment of the ladies

by a committee composed of Mrs. Albert B. Baker, Sr., *chairman;* Mrs. H. M. Albright, Mrs. G. E. Petitt, Mrs. J. D. Stewart, Jr., Mrs. H. B. Caldwell. The program included a tea on Monday afternoon, at which the hostesses were Mrs. John E. Sanford, Mrs. Fred J. Woods, Mrs. Howard C. Fisher and Miss Martha Ann Woodrum. On Tuesday afternoon, a bridge and bingo party was held, at which prizes were won by Mrs. Brady, Mrs. W. T. Wright, Mrs. Frank Moore, Mrs. Carroll Streeter, Mrs. Diane Taylor, Mrs. Harry B. Caldwell, Mrs. H. M. Albright, Mrs. E. Ryland, Mrs. George Osborne, Mrs. F. L. Blount, Mrs. J. A. Hynds, Mrs. Richard Koos, Mrs. W. L. Doyle, Mrs. J. D. Stewart, Mrs. I. D. Dawes, Miss Martha Ann Woodrum, Miss Patricia Andrews, Mrs. John W. Ground, III, Mrs. C. M. Harris, Mrs. Roy F. Camp, Mrs. B. E. Stewart, Mrs. Charles Harding, Mrs. J. A. Howell, Mrs. N. S. Stokes, Mrs. Garnett F. Jordan, Mrs. Burton A. Ford.

General Session, June 20th

President Woodrum called the opening session of the Convention to order at 10 A. M., Monday, June 20th. In his address, Mr. Woodrum emphasized that "every American citizen has a stake in the preservation of our private enterprise system and indifference inevitably leads to regimentation.

"Any student of current events must recognize a very definite trend towards bigger Government, more centralizing authority in Washington and more regimentation and regulation of Americans and American enterprise," he said. "These are times in which American citizens individually and collectively must be on guard and alert. It is no time for timid souls. Voters cannot be content just to elect representatives and send them to Washington—if a truly representative Government is to be maintained, their reasoning and recommendations must be a part of the legislative process.

Mr. Woodrum paid tribute to the fertilizer industry which he said "has rendered outstanding service to American agriculture" and "has been responsive to the results of technical and scientific study."

"The industry is progressive and alert," he said. "In a commendable way, it is meeting the phenomenal national and international demand for more plant food. The industry is cooperating with farmers and their research and educational leaders in providing the kinds and quantities of fertilizer needed to meet the requirements of our wide variety of crops and soils.

"Industry is cognizant of its obligation to the American farmer and joins with him in support of the sound programs of all research and educational institutions. Industry hails the increasing consciousness that the fertility of our soils must be preserved. And in fact, the industry has made substantial contributions not only in maintaining but in increasing the fertility of the Nation's soils.

"New records of fertilizer production have been established with an average increase of about a million tons a year for the past 10 years and the fertilizer industry will continue to march abreast with the most progressive leaders in service to agriculture and the Nation."

The balance of the Monday session was devoted to a panel on the subject of "Fertilizer, Farming and the Future." Dr. Paul D. Sanders, Richmond, Va. and editor of *Southern Planter* acted as moderator and opened the discussion.

Dr. Paul D. Sanders

"Along with the experiment stations, extension services, vocational teachers, conservationists, farm leaders and others who have shared largely in increasing the nation's standards of living, the fertilizer manufacturers also can take a bow," Dr. Sanders said. "They not only have set new records of fertilizer production each year for nearly a decade, but they have enhanced the value of their products and at prices less than for any other major item entering into the cost of agricultural production.

"Another significant tribute to the fertilizer industry is the confidence they have exhibited in their customers, the farmers, and the future of agriculture under an economy of abundance. While many of the 'long-haired,' self-styled benefactors of farmers were busy urging the Government to enter further into the manufacture of plant foods, the manufacturers themselves were busy expanding their plants to satisfy the immediate needs of farmers as well as their future requirements. Even today, the industry is continuing a program of expansion at a cost of millions of dollars—making huge investments which give ample testimony of their confidence in farming's future.

"Looking further into farming's future, I hope that we have at long last realized in this country what the older civilizations, like China and India, have learned through tragic error: that a rich soil builds a rich civilization, that an impoverished soil means an impoverished people, that a nation cannot rise above

its soil resources. The exploitation and profligate waste of our fabulous natural resources in the past century cannot long be continued without serious consequences to our standard of living, and indeed, to our form of government itself."

Dr. R. F. Chandler, Jr.

Dr. R. F. Chandler, Jr., Director of the Agricultural Experiment Station and Dean, College of Agriculture at the University of New Hampshire, Durham, was the next speaker and pointed out that increased use of fertilizers to secure higher yields of better quality forage crops and pastures in the 12 Northeastern states offers farmers "a complete assurance of lowering the cost of milk production."

Dr. Chandler said that the "real reason" for the lack of any significant increases in hay yields in the Northeastern states during the last 10 years "is that a majority of our hay and pasture land is not being managed intensively," but emphasized that "there is adequate experimental evidence to show that these yields could be doubled to quadrupled by the liberal use of mineral fertilizers and lime."

Tracing the increase in per acre yields of potatoes in the Northeastern states from 75 bushels in 1889 to approximately 200 bushels last year, the New Hampshire research leader said that better varieties, use of improved insecticides and fungicides, use of land "best suited for the crop" were among contributing factors, but added that "barring certain variations caused by weather conditions, average yields paralleled increases in fertilizer usage."

He cited, for example, that New England experiment station recommendations for potatoes in 1900 called for 1,000 pounds of a 20-unit mixture per acre whereas members of the New Hampshire 300-bushel potato club report using nearly 3,000 pounds per acre since the war.

"That chemical fertilizers and lime have played an absolutely essential part in the development of agriculture in the Northeastern region is an established fact that no person closely associated with agriculture denies," Dr. Chandler said.

He described as "excellent" the future of farming in the Northeast, but emphasized: (1) "if real success is to be achieved, it can only be done by the use of modern and efficient methods;" (2) farmers "must continue to substitute intensive agriculture for the more extensive type;" (3) "quality must continue to be foremost if we are to maintain our markets" and (4) "labor saving equipment and fertilizers must be used intelligently."

Dr. Ralph W. Cummings

Dr. Ralph W. Cummings, associate director of the N. C. Agricultural Experiment Station, Raleigh, in his remarks emphasized that "the areas in the Southeast which are able to maintain a stable agriculture over any appreciable span of years without systematic use of fertilizers are very limited," adding that plant foods "must play a major role" in future farming development.

"The agriculture of the South is uniquely dependent on the use of fertilizers," Dr. Cummings said. "Its soils are *not* noted for their fertility in the virgin state. The climate, characterized by a relatively high and well-distributed rainfall, warm temperatures and a long frost-free season is in itself favorable to the production of many farm crops but is one which promotes rapid weathering of the soil materials and the depletion of plant food by leaching.

"Fertilizers not only are essential in producing high yields but actually determine what crops can be grown successfully in the region. Without them few of our present crops in the Southeast could be grown successfully at all and the agriculture would exhibit an entirely different pattern. In looking at fertilizers in relation to farming in the future in this area, therefore, the expected trends in the agriculture must be considered. The pattern of farming will determine the kinds and amounts of plant food needed and the supply and relative cost of the plant foods could have an important bearing on the type of agriculture which is practiced. "North Carolina has been leading the Nation in tonnage of commercial fertilizers used. This state ranks third in the Nation in cash return from crops. However, of its 18,600,000 acres in farms, only about 40 per cent is classed as crop land. The three major cash crops—tobacco, cotton, and peanuts—together occupy about only 20 per cent of the crop land or less than nine per cent of the total farm land. Two of these crops—tobacco and cotton—are heavy users of fertilizers. The opportunities for further agricultural development in this area are very considerable. And in its agricultural development, fertilizers must play a major role. The situation in North Carolina has its parallel in most of the other Southeastern states. This is truly a land of opportunity, for farmers and the fertilizer industry alike."

In presenting the governmental point of view, Representative Charles B. Hoeven (R-

Iowa), member of the House Agriculture Committee, said "there is no use criticizing Great Britain because it has adopted a form of socialistic government, nor Russia because of its statism" for "we can go down the road to either or both if we put the government in business."

Representative Charles B. Hoeven

"The American farm is said to represent the last stronghold of the competitive free enterprise system as we have always known it in this country," he said. "The farmer is still a man who likes to run his own business without unnecessary interference from Washington. Appealing and Utopian plans for the welfare of agriculture are being presented to him almost daily and he regards them somewhat with suspicion. If the American farmer is to continue as the champion of our private enterprise system, we must make that system work before his very eyes. We cannot take anything for granted."

Representative Hoeven paid tribute to the fertilizer industry which he said "has done a good job" and "its work should be encouraged."

"The plant food industry must keep the good will of the farmer in producing the supply of fertilizer he needs," he added. "It can be done if our free enterprise system is permitted to carry on without the further interference and encroachment of government. When the American farmer sees that private enterprise is fulfilling his needs and is doing a better job than the government could do, he surely is going to remain on the side of private enterprise where he traditionally and conscientiously belongs. In the last analysis, the American farmer wants to be counted on the side of free enterprise which has made America the greatest industrial nation in the world.

"Most Americans are not in favor of putting the Federal Government in business in time of peace. So the average taxpayer, including the farmer, does not like to use the taxpayers' money to finance the construction, maintenance, and operation of fertilizer manufacturing plants when private industry is anxious and willing to increase the production of essential and badly needed fertilizer. Such plants are in direct competition with private industry. Those of us who are interested in the welfare of agriculture are in favor of more, better, and cheaper fertilizer but, at the same time, we are most anxious for private industry to have an opportunity to function and to perform to the utmost of its capacity. Once we break away from the basic and fundamental principle of free private enterprise, it will be easier to do so again to the detriment of other industries."

Dr. W. H. Pierre

Speaking for the great Middle West, Dr. W. H. Pierre, head of the Agronomy Department, Iowa State College at Ames, said that "there is no question that the North Central States should be using higher amounts of fertilizers if soil fertility is to be maintained or increased where needed for obtaining more efficient production," estimating that in Iowa alone "the amounts used at present should be more than tripled."

Analyzing a 422-per cent increase in use of fertilizers in the North Central States last season compared with 1935–39, Dr. Pierre said that advances in farming technology "would have little effect" if farmers were not convinced that "fertilizer use is profitable."

"Farmers in the mid-west are more interested in soil conservation and more aware of the importance of high level soil fertility for efficient crop production than ever before."

Dr. Pierre pointed out that "major changes" have taken place in mid-west agriculture during the past 12 to 15 years, citing "in Iowa, for example, there was an increase of over 2,000,000 acres of soil-depleting row crops, primarily corn and soybeans" and "at the same time the acreage of legume-grass meadows and pastures decreased about 1,500,000 acres." He explained "the result was a more rapid depletion in soil fertility" and "consequently, greater increases were obtained from the use of fertilizers, particularly nitrogen fertilizers."

"Another major development that has made fertilizer use more necessary and more profitalbe has been the development of hybrid corn and other improved crop varieties and their widespread use by corn-belt farmers," he added. "Because of their higher yielding potentialities, these crops require a large amount of plant food for maximum yields. They respond to fertilizers, therefore, where the old crop varieties did not."

He listed "other indirect factors" contributing to "greater efficiency in fertilizer use" include (1) the rapid increase in use of lime; (2) greater adoption of erosion control and water conservation practices; (3) advances in mechanization.

Dr. Robert M. Salter

Dr. Robert M. Salter, chief of the Bureau of Plant Industry, Soils and Agricultural Engineering, U. S. Department of Agriculture,

(Continued on page 22)

What 4-H Club Work Means to Me*

By FRANCIS PRESSLY
4-H Club Leader, Stony Point, N. C.

THE 4-H Club program is designed for rural boys and girls 10 to 21 years of age, to encourage them in developing better methods in their daily tasks and living. Essentially, 4-H Club work combines learning by doing.

The four H's stand for the head, heart, hands and health—head for clearer thinking, hearts for greater loyalty, hands for larger service and health for better living. With all four H's devoted to the best interest of agriculture, 4-h Club members daily are building better communities, better states and a better Nation in which to live.

Ten guideposts are used by cooperative extension workers and local leaders to aid 4-H members in analyzing their own situations, needs and interests so they may build programs that will help to prepare them for citizenship, physically, mentally and spiritually by—

1. Developing talents for greater usefulness
2. Joining with friends for work, fun and fellowship
3. Learning to live in a changing world
4. Choosing a way to earn a living
5. Producing food and fiber for home and market
6. Creating better homes for better living
7. Conserving nature's resources for security and happiness
8. Building health for a strong America
9. Sharing responsibilities for community improvement
10. Serving as citizens in maintaining world peace

Four-H has helped to develop 10,000,000 young citizens since its beginning. Last year there were 115,525 4-H members in North Carolina and 1,805,045 in the 48 states, Alaska, Hawaii and Puerto Rico. These members work in organized local groups or clubs in these activities that lend themselves to group action. Representatives from these groups meet in county, district, state and national camps or conferences where programs in recreation and topics of general interest are presented.

My 4-H Club has offered me more than the opportunity to associate with young men and women interested in farming and homemaking. Real benefits have been achieved with individual farm and home projects which usually leave lasting values to the Club member as well as the community. In my own case, during the past 8 years I have conducted 8 different projects in dairying, cotton, corn, rural electrification, soil conservation, gardening, baby beef production and health.

My herd of 18 pure bred Jerseys is a result of my first project with a dairy calf. Thus, early in my 4-H Club career the importance of good pastures to provide the cheapest feed available was foremost in my mind and plant foods played an important role in making possible an abundant source of vitamins, proteins and mineral matter so necessary in building a successful herd. My animals have been shown for a number of years in counties, parishes and states and for the past three years some animals have been shown at the National Jersey Show, Columbus, Ohio. Four-H Club work, in fact, made it possible for me to become a member of the State Judging Team for two years and winning showmnaship prizes in the State six times. In 27 different showings, the total of 67 animals entered had won for me prizes totaling more than $500.00.

4-H Club work has broadened my experience through associations with some of the National leaders in the program in the two trips I have won to the National Congress in Chicago as a result of my efforts in the fields of dairy production and rural electrification.

Again in 1947 and 1948 in the field of soil conservation as a county winner, the importance of fertilizer was emphasized. Four-H Clubs and their members are vitally concerned with the conservation of our soil resources and one of the essentials is fertilizers both for high crop yields of better quality as well as for maintaining, replenishing and increasing the fertility of our soils.

(Continued on page 28)

* An address delivered before the Fourth Annua Convention of the American Plant Food Council, Bretton Woods, N. H., June 21, 1949.

THE AMERICAN FERTILIZER

ESTABLISHED 1894

PUBLISHED EVERY OTHER SATURDAY BY
WARE BROS. COMPANY
317 NORTH BROAD ST., PHILADELPHIA 7, PA.

A Magazine international in scope and circulation devoted exclusively to the Commercial Fertilizer Industry and its Allied Industries

PIONEER JOURNAL OF THE FERTILIZER INDUSTRY

A. A. WARE, Editor
K. F. WARE, Advertising Manager

ANNUAL SUBSCRIPTION RATES

U. S. and its possessions, also Cuba and Panama	$3.00
Canada and Mexico	4.00
Other Foreign Countries	5.00
Single Copy	.25
Back Numbers	.50

THE AMERICAN FERTILIZER is not necessarily in accord with opinions expressed in contributed articles that appear in its columns. Copyright, 1949, by Ware Bros. Company.

Vol. 111 JULY 9, 1949 No. 1

Principal Articles in This Issue

	PAGE
AMERICAN PLANT FOOD COUNCIL CONVENTION	7
WHAT 4-H CLUB WORK MEANS TO ME, *by Francis Pressly*	11
The Convention Golf Tournament	12
Potash Production for Fiscal Year at New High	13
Thomas Ware Appointed Chief Engineer of International	13
Obituary—Charles J. Brand	14
Phillips Chemical Increasing Nitrogen Output	14
FERTILIZER MATERIALS MARKET	
New York	15
Charleston	16
Philadelphia	18
Chicago	18
New Worthington-Ransome Mixer with Push Button Controls	20
Superphosphate O. K. with Manure, says Sauchelli	20

The Convention Golf Tournament

The annual Convention Golf Tournament, held on the afternoons of June 20th and 21st, brought out a large number of contestants to match their skill against the hazards of the well-known championship Bretton Woods Course. The Golf Committee, composed of Albert B. Baker, Jr., *Chairman*, Albert B. Baker, Sr., Charles F. Burroughs, Jr., Dean Gidney, John Ground III, and W. F. McLane, had arranged a series of events which gave opportunities to every level of golfing skill. A ladies putting contest was held on the morning of June 22nd.

Monday, June 20th

Low Gross—1. R. H. Lindeman, International Minerals & Chemical Corporation, Chicago, Ill.; 2. G. J. Campbell, Calais, Maine; 3. Watts Gunn, Chilean Nitrate Sales Corp., New York, N. Y.

Low Net—1. J. E. Barnes, U. S. Potash Company, New York, N. Y.; 2. F. J. Bryan, Chilean Nitrate Sales Corporation, New York, N. Y.; 3. W. R. E. Andrews, Brooklyne Chemical Works, Inc., Baltimore, Md.

Veterans Handicap—1. E. F. Schumacher, E. I. duPont de Nemours & Co., Inc. Wilmington, Del.; 2. W. L. Waring, Jr., Lyons Fertilizer Company, Tampa, Fla.

Kickers Handicap—1. W. H. Klee, Naco Fertilizer Company, Jacksonville, Fla.; 2. H. D. Johnson, Virginia-Carolina Chemical Corporation, Richmond, Va.

Nearest Pin—1. J. W. Whittington, Mathieson Chemical Corporation, New York, N. Y.; 2. R. C. Simms, Naco Fertilizer Company, New York, N. Y.

Tuesday, June 21st

Low Gross—1. G. D. Morgan, Jr., Morgan Bros. Bag Company, Richmond, Va.; 2. W. T. Steele, Jr., Southern States Cooperative, Richmond, Va.; 3. E. K. Ludington, Chase Bag Company, New York, N. Y.

Low Net—1. R. W. Goldthwaite, Lion Oil Company, El Dorado, Ark.; 2. G. E. Petitt, Potash Company of America, New York, N. Y.; 3. C. C. Arledge, Armour Fertilizer Co., Atlanta, Ga.

Veterans Handicap—1. J. V. Collis, Federal Chemical Company, Louisville, Ky.; 2. A. B. Baker, Sr., Bradley & Baker, New York, N. Y.

Kickers Handicap—1. H. C. Moore, Armour Fertilizer Works, Atlanta, Ga.; 2. Paul Speer, U. S. Potash Co., New York, N. Y.

Nearest Pin—1. H. McIver, Alex M. McIver & Son, Charleston, South Carolina; 2. S. K.

Bradley, Union Bag Corp., New York, N. Y.

Two Day Low Net—1. C. T. Harding, Virginia-Carolina Chemical Corp., Richmond, Va.; 2. W. B. Hicks, Wilson-Toomer Fertilizer Company, Jacksonville, Fla.; 3. B. D. Barber, Wilson-Toomer Fertilizer Company, Jacksonville, Fla.

Wednesday, June 22nd

Ladies Putting Contest

For Golfers—Winner, Mrs. Paul Speer; runner-up, Mrs. J. B. Ford.

For Non-golfers—Winner, Mrs. B. E. Stewart; runner-up, Mrs. T. E. Bradley.

Prize Donors

Agricultural Chemicals Corp., New York, N. Y.; American Plant Food Council, Washington, D. C.; American Cyanamid Co., New York, N. Y.; Chilean Nitrate Sales Corp., New York, N. Y.; Cooperative Fertilizer Service, Richmond, Va.; Ellis Chemical Co., New Albany, Ind.; Federil Chemical Co., Louisville, Ky.; G. L. F. Soil Building Service, Ithaca, N. Y.; Mathieson Chemical Corp., New York, N. Y.; Michigan Fertilizer Co., Lansing, Mich.; Potash Company of America, New York, N. Y.; F. S. Royster Guano Co., Norfolk, Va.; Southern Fertilizer & Chemical Co., Savannah, Ga.; Sturtevant Mill Co., Boston, Mass.; United States Potash Co., New York, N. Y.; Wilson & Toomer Fertilizer Co., Jacksonville, Fla.; Union Special Machine Co., Chicago, Ill.

Potash Production For Fiscal Year at New High

Potash deliveries in North America reached a total of 1,169,548 tons K_2O during the fiscal year of June 1948 through May 1949, a new high record, according to the American Potash Institute. This represents an increase of 65,025 tons or six per cent more than the corresponding figure in 1947–48. The deliveries were made in 45 states, the District of Columbia, Puerto Rico, Cuba, Hawaii, Canada, and a few other countries, by the five leading American potash producers and include also importations of European potash into the United States. They include imports of European potash into Canada only up to December 31, 1948.

Deliveries for agricultural purposes in the Continental United States amounted to 1,008,901 tons K_2O, an eight per cent increase over last year. Canada received 40,083 tons K_2O, an increase of one per cent; Cuba 4,314 tons, an increase of two per cent; Puerto Rico, 17,641 tons, a decrease of 10 per cent; Hawaii, 8,290 tons, a decrease of 32 per cent; and other countries, 12,689 tons, an increase of 10 per cent compared to last year.

Ohio replaced Georgia as the leading state for deliveries, followed in order by Georgia, Illinois, North Carolina, Virginia, and Florida, each taking more than 60,000 tons K_2O. Deliveries, however, do not necessarily correspond to consumption in a given state.

The 60 per cent muriate of potash continued to be the principal grade, comprising 79 per cent of the total agricultural potash delivered. Sulphate of potash and sulphate of potash-magnesia together made up seven per cent of deliveries; 50 per cent muriate of potash, eight per cent; and manure salts, six per cent, about the same as last year.

Deliveries of potash for chemical uses amounted to 77,632 tons K_2O, a decrease of 12 per cent under 1947–48. The 60 per cent muriate grade made up 94 per cent of chemical deliveries, and sulphate of potash, six per cent.

Foy to Manage Ashcraft-Wilkinson Tampa Office

The Ashcraft-Wilkinson Co., of Atlantat Ga., has announced the transfer of John E. Foy, Jr. to the position of Manager of their office in Tampa, Fla. Mr. Foy is at present manager of the Jackson, Miss. office and will take over his new duties on August 1st.

Thomas Ware Appointed Chief Engineer of International

Thomas M. Ware has been appointed chief engineer of International Minerals & Chemical Corporation as of July 1st and assumed full responsibility of the engineering department on that date. He will report directly to the president of the company, Louis Ware, and succeeds James H. Barr who is retiring from active business after 38 years of service with International. However, it has been announced that Mr. Barr still will be retained by the company in a limited consulting capacity for an indefinite period.

Thomas Ware received his degree in mechanical engineering from Cornell University. Prior to the war he was engaged in armament engineering with the aircraft industry. During the war he was in the United States Navy, Office of Naval Research in the Special Devices Division. Before becoming associated with International he was on the staff of George Fry & Associates, management consulting engineers. His work at International has been as an industrial engineer on the engineering staff.

OBITUARY

Charles J. Brand

Charles J. Brand, former executive secretary and treasurer of the National Fertilizer Association, died in Washington from a coronary thrombosis on June 29th, at 69 years of age. Mr. Brand had been in poor health for several years but was able to attend a meeting of the Del-Mar-Va Peninsula Fertilizer Association only a few days before his death.

An authority of world-wide recognition on agriculture and agricultural marketing, Mr. Brand was a native of Minnesota and graduated at the University of Minnesota. In 1903, he joined the Department of Agriculture as a scientific assistant in the seed laboratory, and was in charge of clover and alfalfa investigations, paper plant investigations, and cotton handling and marketing. He was instumental in organizing the Bureau of Markets and was its first chief, 1913–1919. In this capacity he enforced presidential proclamations governing stockyards and supervised war-time purchase and distribution of nitrate of soda to farmers.

During this time he served as a member of several committees of the War Industries Board, of which Bernard M. Baruch was chairman. He was vice president and manager of American Fruit Growers, Inc., 1919–1922. Returning to U.S.D.A. he was consulting specialist in marketing from 1922 to 1925.

In 1925, when the present National Fertilizer Association was formed from a merger of the old National Fertilizer Association and the Southern Fertilizer Association, Mr.Brand was named executive secretary and treasurer, and served in that capacity for 20 years until his retirement in 1945.

During the operation of the Agricultural Adjustment Act, Mr. Brand was given leave of absence and served as Co-administrator of the Act with George Peek. He was also executive director of the Fertilizer Code under N.R.A. from 1933 to 1935.

Following his retirement, Mr. Brand maintained an office in Washington and served as consultant to the president of the Davison Chemical Corp., Baltimore. He also wrote a book "What Economic System for America" and prepared many papers and addresses on agricultural and fertilizer subjects.

During his career he had been chairman of the International Institute of Agriculture at Rome and a member of the American Association for the Advancement of Science, the National Industrial Council, the Academy of Political Science, the American Marketing Association, American Farm Economic Association, and many other trade and professional associations.

He had a host of friends throughout the fertilizer industry, to which he gave many years of valuable servie. He is survived by his widow, Mary Vining Brand, a brother and two sisters.

Phillips Chemical Increasing Nitrogen Output

Phillips Chemical Company, a subsidiary of Phillips Petroleum Company, is installing new production facilities in its anhydrous ammonia plant near Etter, Texas, which will increase its capacity from 70,000 tons per year to over 140,000 tons. It is expected that the new apparatus will be in production within the next two months.

In addition to the ammonia plant, the company is installing a nitric acid plant, with purpose of manufacturing ammonium nitrate for fertilizer use. An ammonium nitrate factory is planned for completion by the end of the year and an annual output of 100,000 tons of ammonium nitrate is expected.

FERTILIZER MATERIALS

FAST DEPENDABLE BROKERAGE SERVICE

Your Inquiries Solicited

FRANK R. JACKLE

405 LEXINGTON AVENUE **NEW YORK 17, N. Y.**

FERTILIZER MATERIALS MARKET

NEW YORK

Buyers Reluctant to Take Advance Sulphate of Ammonia for Storage. Nitrate of Soda in Better Supply. Feed Producers Make Heavy Demands on Materials Market. Superphosphate Contracts for Next Season Show Selling Competition. Potash Shipments Continue in Volume

Exclusive Correspondence to "The American Fertilizer"

NEW YORK, July 6, 1949.

Sulphate of Ammonia

Some buyers are refusing to take material for immediate shipment as they do not need it for mixing and do not seem to want to store it for future. On the other hand, with the production at the steel mills dropping, it is thought there will not be so much of the coke oven material produced. Prices remain firm, however, on contract.

Nitrate of Soda

This material is readily obtainable for quick shipment and while some demand is noted for top dressing, supplies seem to be adequate to cover such needs. No change in prices were noted.

Ammonium Nitrate

Producers are shipping against contracts with no further price changes noted. Demand is fairly good from most sections but some buyers are scanning freight rates from production points with the idea of buying from the points taking the lowest rates.

Organics

The organic fertilizer materials market remains strong, due to heavy buying by the feed trade. Feed manufacturers who have pursued a policy of buying from hand to mouth suddenly found themselves on the short side and rushed into the market, with the result that soybean meal, cottonseed meal and linseed meal all advanced in price, in some instances as much as $15.00 per ton over the last few weeks. Supplies for quick shipment in some cases are hard to locate. Tankage and blood were well sold ahead and last sales at $8.25 to $8.50 per unit of ammonia, f.o.b. shipping points.

Nitrogenous Material

Due to the scarcity of some organics, this material was reported moving well in certain sections and some producers are sold up for nearby shipments.

Castor Pomace

With the castor oil business still bad, little improvement is looked for in the production of castor pomace and producers are still unable to offer any material for future but are shipping small amounts on old contracts.

Fish Meal

Reports from fish factories state that the fishing so far is only fair and spot fish meal is still bringing good prices. Spot material is selling for $180 to $190 per ton, f.o.b. Chesapeake Bay. Material for quick shipment is rather hard to locate. These prices are too rich for the fertilizer trade.

Bone Meal

This material is still scarce for prompt shipment and demand continues heavy from the feed trade. Domestic production is sharply curtailed and it is expected this condition will prevail for some time to come.

Hoof Meal

Several sales were reported at around $7.00 per unit of ammonia, ($8.51 per cent N), f.o.b. shipping points and demand fairly good.

Superphosphate

Increased selling competition is noted in certain areas and some buyers have been a little slow to sign contracts for the coming fertilizer year. While no price cutting was reported, stocks are said to be large at certain production points. Triple superphosphate is in better supply, due to the increased production.

Potash

Shipments are now going forward on new

contracts and most buyers are in a more comfortable position as far as potash is concerned than they have been in some time. However, the demand continues good from all sections.

CHARLESTON

End of Season Finds Mixers with Little Carry-over Material and Good Prospects for Future Supplies. Phosphate Rock Strikes Settled

Exclusive Correspondence to "The American Fertilizer"

CHARLESTON, July 5, 1949.

It now appears that sufficient supplies of mineral nitrogen will be available for the new season. It is also expected that potash production will be adequate for 1949–50. Superphosphate supplies are likewise expected to be sufficient now that all strikes have been settled at the rock mines. Most fertilizer manufacturers are in comfortable position with practically no carry-over of materials from the last season.

Organics.—It appears now that organics may be the only sources of nitrogen in fairly tight supply for use by fertilizer manufacturers. Castor pomace is sold up and the prospects for additional supplies are uncertain. One producer of nitrogenous tankage is sold up through January and supplies of raw materials for all nitrogenous producers are rather uncertain. Nitrogenous tankage is offered at $3.15 to $4.00 per unit of ammonia ($3.83 to $4.86 per unit N), f.o.b. production point, depending on its location. Imported organics continue too high in price to interest domestic buyers.

Castor Pomace.—The producers are sold up and, due to the slack demand for castor oil for industrial purposes, the future production of castor pomace is most uncertain. The market is nominally at $21.00 per ton, f.o.b. production points, with no new sales reported.

Dried Ground Blood.—The market is stronger, due to feed interest. Chicago recently sold at $8.50 per unit of ammonia ($10.33 per unit N), in bulk, with the New York market at around $8.00 per unit of ammonia ($9.72 per unit N).

Potash.—The 1949–50 production is now practically entirely contracted. Domestic production facilities indicate that there will be better distribution during the coming season. Demand continues active and prices firm.

Phosphate Rock.—With the recent termination of the strike at one of the major producers, all rock mines are now operating on schedule. Demand continues good and prices firm.

Superphosphate.—Due to normal shipments of phosphate rock, production of superphosphate has also eased the temporarily tight market conditions in the southeast and Midwest. Prices remain firm and demand seasonal.

Sulphate of Ammonia.—A good quantity of future shipment coke oven and synthetic sulphate of ammonia has been sold. It is reported that Phillips Chemical Company will have available 85 per cent of their production for commercial use. Coke oven production is quoted at $45.00 per ton in bulk f.o.b. the ovens, and synthetic material is offered at $50.50 per ton in bulk f.o.b. southern production points.

Nitrate of Soda.—Shipments of Chilean Nitrate of Soda for the season 1948–49 have been completed and it is expected that the scheduled importations will be sufficient to take care of the needs for 1949–50. Supplies of domestic nitrate of soda will supplement importations.

JAITE
HEAVY DUTY MULTI-WALL PAPER BAGS
OFFER DEPENDABLE PROTECTION FOR
YOUR FERTILIZER
THE JAITE COMPANY
"Manufacturers of Paper and Paper Bags"
JAITE, OHIO
"IT'S IN THE J BAG"
SINCE 1905

Monsanto offers designs for modern sulfuric acid plants

You probably can save considerable money by producing your own sulfuric acid. And you will have the added advantage of controlling your supply of this essential chemical. To help you get started with a project, Monsanto specialists will discuss with you, without obligation, all the modern improvements in postwar sulfuric acid plants.

Standard Monsanto designs cover contact plants that range from 5 to 500 tons of acid (100% H_2SO_4 basis) daily . . . *with no equipment in parallel.* Furthermore, these plants are so flexible in operation that you can produce any desired quantity from 30% of rated capacity to more than capacity. This can be done without "blanking off" or other changes in equipment that consume time and labor.

More than 200 Monsanto-designed sulfuric acid contact plants are serving industries throughout the world. Savings frequently are enough to pay for the installations in a surprisingly short time. Further information will be sent promptly upon request. Use the handy coupon or write: MONSANTO CHEMICAL COMPANY, Engineering Sales Department, 1751 South Second Street, St. Louis 4, Mo.

* * *

MONSANTO VANADIUM CATALYST now is used by approximately 250 sulfuric acid plants in 28 countries. It is highly efficient, long-lasting and rugged.

MONSANTO
CHEMICALS AND PLASTICS

MONSANTO CHEMICAL COMPANY
Engineering Sales Department
1751 South Second Street, St. Louis 4, Missouri

Please send me information regarding Monsanto's services for improving sulfuric acid production.

Name_____ Title_____

Company_____

Street_____

City_____ Zone____ State_____

SERVING INDUSTRY . . . WHICH SERVES MANKIND

PHILADELPHIA

Market Quiet Following Close of Season. Material Supply Prospects Good for Next Year

Exclusive Correspondence to "The American Fertilizer"

PHILADELPHIA, July 5, 1949.

With the close of the 1948–1949 season, practically all raw materials are in a quiet position. Prospects for the coming season are very good so far as the supply of materials is concerned.

Sulphate of Ammonia.—While the market is reported firm, the demand for prompt is decidedly limited and requirements for the coming season are said to be well under contract. There are numerous offerings of resale for prompt and forward.

Ammonium Nitrate.—The market is very quiet and recent production has been in reduced proportions.

Nitrate of Soda.—There is not much buying interest and any current movement is for top-dressing. Production has increased and everything points to an ample supply during the new fertilizer year.

Cyanamid.—A quiet but steady market is reported with no price changes noted.

Blood, Tankage, Bone.—These materials are stronger, with blood and tankage ranging from $8.25 to $9.00 per unit of ammonia ($10.02 to $10.94 per unit N). Bone continues in short supply due to limited production and price ranges from $70.00 to $75.00 per ton. Demand continues strong.

Castor Pomace.—Production is much reduced and nothing is available at first hand. No resale offerings are noted.

Fish Scrap.—Fishing is reported as being not very satisfactory and there are limited offerings at increased prices. Scrap has been quoted at $175.00, with menhaden meal at $180.00 to $185.00 per ton.

Phosphate Rock.—Labor trouble seems now to have been cured, but deliveries are still somewhat off schedule, with the demand very good.

Superphosphate.—Production is slightly reduced while demand continues on a normal seasonal basis with considerable interest being shown in futures.

Potash.—Shipments are moving according to schedule with the production sold pretty well ahead for delivery during the new fertilizer season Demand is good.

CHICAGO

Feed Materials Market in Strong Position. Demand Greater Than Supply. Tankage Prices Rise

Exclusive Correspondence to "The American Fertilizer"

CHICAGO, July 5, 1949.

The Midwestern market on animal proteins continues in a very strong position. At present the demand for all products is greater than the available supply which, because of the low prices of grease, is a blessing to the rendering industry. Prices on finished goods vary according to location.

In highly competitive areas the prices on meat scraps range from $135.00 to $140.00 per ton, but in outside regions as high as $145.00 per ton is reported and up to $150.00 is asked. Digester tankage is selling at $130.00 to $135.00 per ton, sacked, f.o.b. production points. In some spots $5.00 to $10.00 per ton higher is asked. Unground dry rendered tankage is strong at $2.60 to $2.70 per unit of protein, generally f.o.b. shipping point.

Dried blood last sold at $8.50 per unit of ammonia ($10.33 per unit N), and wet tankage as high as $11.00 per unit of ammonia $13.37 per unit N). Steamed bone meal, 65 per cent, is firm at $75.00 per ton and raw bone meal, 4½ per cent ammonia, 45 per cent B.P.L., $65.00 per ton.

ESTABLISHED 1873

Woodward & Dickerson Inc.

FERTILIZER AND FEED MATERIALS

BROKERS
COMMISSION MERCHANTS

IMPORTERS
EXPORTERS

GIRARD TRUST BUILDING

PHILADELPHIA 2, PA., U. S. A.

Cable Address: "WOODWARD"

Codes used: Acme, Bentley's Complete, Appendix, Private

Photos Courtesy American Plant Food Council

INDUSTRY LEADERS AT THE AMERICAN PLANT FOOD COUNCIL CONVENTION

1. Mr. and Mrs. W. Hampton Logan, R. C. Simms, Mr. and Mrs. W. A. Thurston. 2. Mr. and Mrs. Frank R. Jackle. 3. George E. Petitt, W. T. Steele, Jr., Fred J. Woods, A. Nelson Myers. 4. Mr. and Mrs. I. D. Davis, Chas. E. Heinrichs. 5. S. L. Nevins, G. Fred Coope, Wm. S. Auchincloss. 6. Dr. W. H. Pierre, Mrs. Carroll P. Streeter, Rep. Chas. B. Hoeven, Carroll P. Streeter. 7. W. T. Wright, Mrs. Fred J. Woods, Rep. Harold D. Cooley, Clifton A. Woodrum.

Photos Courtesy American Plant Food Council

AMONG THOSE PRESENT AT BRETTON WOODS

1. Mrs. H. M. Albright, Mrs. J. A. Howell. 2. Miss Rita Bott, G. A. Woods, Rep. Harold D. Cooley. 3. Dr. I. W. Myers. 4. Dr. Ralph W. Cummings, Francis Pressly, Rep. Harold D. Cooley, Dr. Paul D. Sanders, Harry B. Caldwell. 5. Dr. Grover C. Brown, S. D. Gray. 6. W. E. Shelburne, R. W. Goldthwaite, Leroy Donald. 7. Alex. M. McIver, H. H. McIver.

Photos Courtesy American Plant Food Council

AGROMISTS AND EXECUTIVES AT THE CONVENTION

1. B. D. Cloaninger, Dr. Paul D. Sanders. 2. R. F. Chandler. 3. Clifton A. Woodrum, A. Lynn Ivey, Louis H. Wilson. 4. M. S. Wright, L. P. Campbell, Thomas H. Wright. 5. Dr. Ralph W. Cummings, Harry B. Caldwell, Dr. Robert M. Salter. 6. Dr. John R. Taylor, Jr., Dr. H. B. Mann.

Photos Courtesy American Plant Food Council

AFTER-MEETING RELAXATION AT BRETTON WOODS

1. Mrs. George E. Petitt, Mrs. A. Lynn Ivey. 2. Mr. and Mrs. Burton Ford. 3. John E. Fletcher, George W. Gage. 4. J. E. Barnes, Dale C. Kieffer, H. M. Albright. 5. J. E. Barnes, J. E. Sanford, John E. Fletcher. 6. Jos. W. Whittington, W. Allan Moore, Jr. 7. Dr. T. A. Meyer, Dr. John R. Taylor, Jr., Dr. S. F. Thornton.

NEW ST. REGIS MULTIWALLS SPEED FERTILIZER PACKAGING!

New Flat Tube Valve Sewn Paper Bags Give Full Protection; Cut Packaging Cost

If you package fertilizer, this news is important!

We wanted to make a bag that would deliver maximum packaging efficiency and, at the same time, *cost you less.*
How did we do it? By eliminating the valve sleeve and reducing bag length on this new St. Regis Multiwall . . . bringing you a bag that not only cuts your cost, but

HANDLES EASILY—speeds packing

STACKS SECURELY—takes less storage space

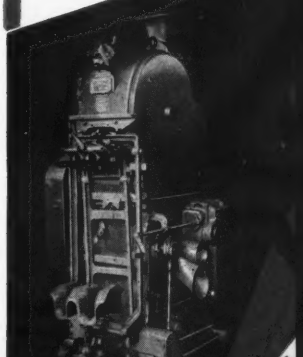
PACKS EVENLY—will not buckle

GIVES YOUR CUSTOMERS all the service and satisfaction St. Regis Multiwalls are famous for.

Bring new economy, new efficiency to your packaging by packing in the new St. Regis flat tube valve sewn paper bag.

St. Regis means packaging *teamwork*

St. Regis Multiwall Paper Bags and a St. Regis Valve Bag Packer, working together, are the ideal team to solve your packaging problem—lower your packaging costs. Find out how you can save money, enjoy *better, speedier* packaging, with a complete St. Regis Packaging System. Your nearest Sales Office will be glad to give you full details.



SALES SUBSIDIARY OF ST. REGIS PAPER COMPANY

ST. REGIS SALES CORPORATION

230 PARK AVENUE • NEW YORK 17, N. Y.

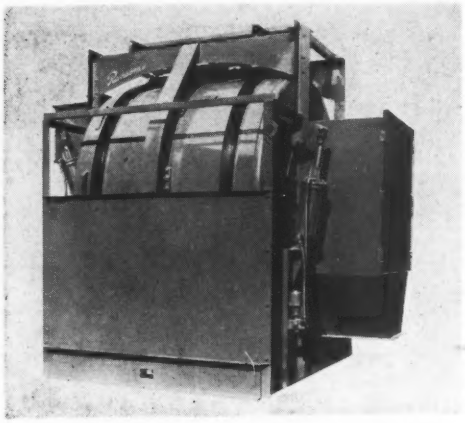
New York • Baltimore • Birmingham • Boston
Chicago • Atlanta
Denver • Los Angeles
San Francisco • Houston
Allentown • Seattle
In Canada:
St. Regis Paper Company (Can.) Ltd. Montreal
Hamilton • Vancouver

You Buy Protection When You Buy Multiwalls

New Worthington-Ransome Mixer with Push Button Controls

A new line of standard fertilizer mixers equipped with push button control of the charging gate and the discharge chute has been placed on the market by Worthington Pump and Machinery Corporation, Worthington-Ransome Industrial Mixer Section, Dunellen, New Jersey.

A suitable arrangement of air cylinders and solenoid air valves replaces the former manual controls, speeding up both the charging and discharging functions. At the same time the



New Worthington-Ransome Mixer

operator is relieved of the manual effort formerly involved. This reduces operator fatigue and makes it possible to maintain a higher rate of production throughout the day.

The company has announced that sales of these mixers and other items of the Worthington-Ransome line will be handled through the Corporation's District Offices and Foreign Representatives.

Sales promotion will be directed by the Ransome Industrial Mixer Section located at the Dunellen works.

Agronomy Society Issues Illustrated Letterhead

The Committee on Fertilizers of the American Society of Agronomy has prepared letterhead sheets which carry on the lower left margin four illustrations in color showing the effect of deficiencies in nitrogen, phosphorus, potash and moisture on the growing corn plant. They are urging the use of this sheet by fertilizer manufacturers and dealers, farm organizations and various other groups, when preparing their stationery.

This project is being handled by one of the committee members, H. H. Tucker, Coke Oven Ammonia Research Bureau, 50 West Broad St., Columbus 15, Ohio, to whom inquiries and orders should be sent. The letterhead sheets are priced at $5.70 per thousand.

Superphosphate O.K. with Manure, Says Sauchelli

In our June 11th issue, we carried an item in which Ohio agronomists claim that the use of superphosphate with manure changes part of the phosphoric acid into an insoluble form. We have received a comment on this from V. Sauchelli, director of agricultural research for the Davison Chemical Corporation, which adds further light on this subject as follows:

"I have been a close student of this relationship between superphosphate and manure for a long time. A number of years ago Dr. A. R. Midgley, Research Agronomist at the Vermont Agricultural Experiment Station, and Dr. W. H. Ross, at that time Research Chemist with the U.S.D.A., Bureau of Plant Industry, investigated this phase very carefully. Their conclusion can be summed up in the following quotation from a letter which I received from Dr. Midgley several years ago:

" 'There has been some question as to the availability of the phosphorus when superphosphate is applied to fresh manure. This is because it reverts to the tri-calcium form. However, it is now quite generally known that tri-calcium phosphate in a freshly precipitated, finely divided condition, and in the presence of actively decomposing organic matter, is sufficiently available for most crops. There is practically no similarity in yield of plants grown with ordinary tri-calcium phos-

FERTILIZER MATERIALS
CHEMICALS
DOMESTIC—FOREIGN

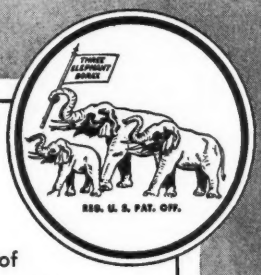
SCAR-LIPMAN & CO., INC.
Empire State Bldg. New York 1, N. Y.
Cable Address: CABESCAR

POTASH
TRONA
SALTS

Trona
Muriate of Potash

Potash, one of the important ingredients of mixed fertilizer, is a vital soil nutrient which aids crop production and helps resist plant diseases. To provide the maximum of this important plant food, we are operating full capacity at Trona, 24 hours a day.

Three Elephant Borax



Agricultural authorities have shown that a lack of Boron in the soil can result in deficiency diseases which seriously impair the yield and quality of crops. When Boron deficiencies are found, follow the recommendations of your local County Agent or State Experimental Stations.

AMERICAN POTASH & CHEMICAL CORPORATION

122 EAST 42nd STREET • • • NEW YORK 17, N. Y.

221 S. LA SALLE STREET
CHICAGO 4, ILLINOIS

214 WALTON BUILDING
ATLANTA 3, GEORGIA

3030 WEST SIXTH STREET
LOS ANGELES 54, CALIF.

"Pioneer Producers of Muriate in America"

phate *without* organic matter and those grown on the freshly precipitated form *with* active organic matter, especially farmyard manure. The latter rapidly decomposes, liberating large quantities of carbonic acid which greatly aids in the availability of this phosphate'."

Mente Adds to Midwest Sales Force

Mente & Co., New Orleans, La., bag manufacturers, has reported the addition of two men to their sales force in the Midwestern area. These are John R. Roche, formerly with the U. S. Bag Co., of Omaha, Neb., and Edward A. Stine, formerly Kanzas City representative of General Mills.

Treatment of Brucellosis and Mastitis with Minor Elements

A progress report has been issued by J. F. Wischhusen, director of Manganese Research & Development Foundation, Cleveland 10, Ohio, giving the results of two years' experimental work on the treatment of brucellosis and mastitis in dairy cattle in the Ozark Mountain area. Preliminary investigation showed that the soil in this region was deficient in many of the trace elements. Experiments were then started in which varying amounts of these elements were added direct to the feed and also to the fertilizer used in the pasture program. The encouraging results to date are contained in Mr. Wischhusen's report, a copy of which can be obtained on application to his office.

American Plant Food Council Convention

(Continued from page 10)

called for a re-examination of the "question of optimum rates of fertilizer application under conditions combining the most advanced methods of producing crops" and predicted "studies will show that rates presently recommended under many conditions are considerably below the optimum."

Dr. Salter said agricultural scientists are finding that while one improved crop production practice is beneficial, "the advantages often pyramid when several good practices are used in the right combination," adding that "recognition of this principle is spreading rapidly in research programs throughout the country."

"As sights are raised toward higher and higher yields it will be necessary to give attention to those practices that supplement the soil's own inherent ability to give up nutrients to crops," he said. "It is becoming apparent that as we move up toward higher yields, soil becomes more and more a medium through which water, oxygen and nutrients are conveyed to plant roots, and less and less the direct source of plant nutrients.

"In light of these facts it seems obvious that the future is bright for the fertilizer industry."

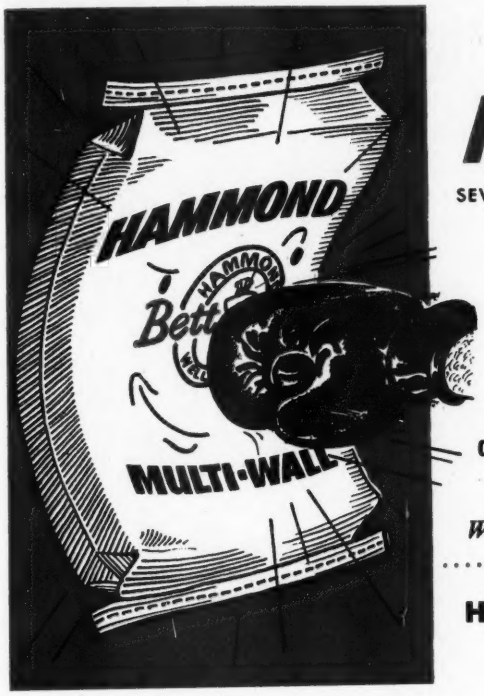
Dr. Salter said that research results have not proven yet whether or not the "point of uneconomical returns from heavy fertilizer applications" has been reached, but added that "under irrigation in the Columbia River Basin, yields are still going up rapidly with nitrogen rates as high as 240 pounds per acre with the ideal combination of other factors" and "this year we're using rates up to *960* pounds of elemental nitrogen per acre, which should be well above the practical level."

"So far we have no more than scratched the surface with this combined approach to research," he added. "Of this we are sure. We have by no means exhausted the possibilities of still further increasing crop yields as we learn to combine in optimum degree the various factors of crop production under the diverse environments of soil and climate. We now recognize that past ideas of what constituted adequate fertility must be revised drastically upward if we are to strive for top yields through this combined approach."

General Session, June 21st

The final meeting of the convention featured talks by Dr. William J. Myers, Dean of Cornell College of Agriculture, Ithaca, N. Y., and by two leaders in the National 4-H Club work, Miss Rita Bott of Triadelphia, W. Va., and Francis Pressly, Stony Point, N. C. Mr. Pressly's talk is given in full elsewhere in this issue.

Stedman
FERTILIZER PLANT
EQUIPMENT
Dependable for Fifty Years
All-Steel Self-Contained Fertilizer Mixing Units
Batch Mixers—Dry Batching
Pan Mixers—Wet Mixing
Swing Hammer and Cage Type Tailings Pulverizers
Vibrating Screens
Dust Weigh Hoppers
Acid Weigh Scales
STEDMAN'S FOUNDRY & MACHINE WORKS
AURORA, INDIANA, U. S. A. Founded 1884



HAMMOND
Multi-Wall
SEWN • PASTED • OPEN MOUTH • VALVE STYLE
BAGS

. . . take a lot of punishment in delivering your products safely and dependably . . . without losing their attractive appearance. *They're Strong, Weather-proof, Economical!*

Write for quotation on your needs! Better Bags

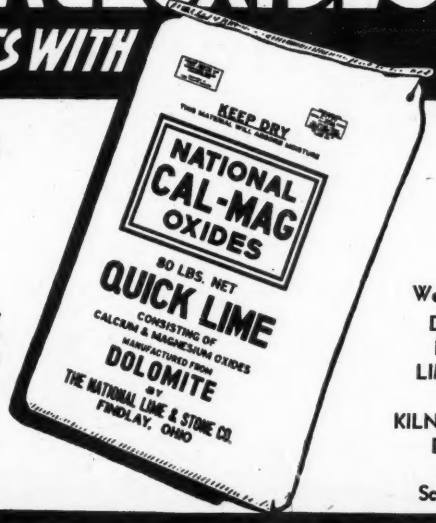
HAMMOND BAG & PAPER CO.
GENERAL OFFICES: WELLSBURG, W. VA.
Plants in Wellsburg, W. Va., and Pine Bluff, Ark.

CAL-MAG OXIDES
CUT YOUR COSTS WITH

CAL-MAG OXIDES
MgO 40.39
CaO 58.07
TNP 203.88

Unexcelled for its superior Dehydrating, Neutralizing, and Curing factors in the preparation of better fertilizers. Write for complete information.

PROMPT SHIPMENTS
Three railroads serve our Carey, Ohio plant—assuring prompt delivery—everywhere.



We Also Produce
DOLOMITIC HYDRATED LIME (165 TNP)
and
KILN DRIED RAW DOLOMITE (107 TNP)
Screened to size

The NATIONAL LIME and STONE CO.
General Offices • • • • • FINDLAY, OHIO

Miss Rita Bott

Miss Bott, who recently spent three months with Great Britain farming people, said that "English farmers certainly realize the advantages of the use of fertilizers and crop rotation" adding that "although they have been farming for centuries, they still get just as good production and even better in some sections, than we do."

One of 17 American youths assigned to visit cooperating countries in connection with the International Farm Youth Exchange Project, the young 4-H Club representative keynoted her talk with the conclusion that "if we will start as young people to learn to live, work and play together and can talk things over now, we can help build the foundations for a lasting world peace."

Miss Bott reported that British rural organizations, comparable to 4-H Clubs, were "developing along our methods and ideals, although they have been restricted because of their rationing, lack of money and materials," adding that "their attitude toward this restriction is amazing, for they feel they can accept the worst if it is for the good of their country."

"I was fortunate in getting to stay with people in England, Scotland and Wales and find that although each was different from one another, they all had the same love for their country and were trying to do their best job to get it back on its two feet again," she said.

"While staying on 14 farms I helped with the work as much as was allowed, particularly with the household duties and found that we certainly are a fortunate country to have all our conveniences, which we call necessities, such as washing machines and refrigerators that are considered luxuries by these people. I left their country feeling more appreciative of the things I have and of the fact that I live in America where democracy reigns."

Dr. W. I. Myers

Future farm prices and incomes will depend largely on the general level of prices, employment and production, not on agricultural programs, Dr. W. I. Myers stated in his address.

"No farmer or group of farmers has yet devised a way of increasing farm income by decreasing production," Dean Myers stated, and he emphasized that "we cannot have a prosperous agriculture unless the rest of the economy—our consumers—are prosperous. It is bad enough to have income lowered by declining prices, but if both prices and production decline the national economy is injured and farmers are not helped."

Dr. Myers expressed the opinion that it would be desirable to remove artificial stimulus of guaranteed prices at high levels with accompanying rigid governmental controls of production and marketing. The latter, he contends, are not the solution of the problem of farm readjustment. "Farmers need freedom to shift production to meet consumer demands. There should also be freedom to permit production of various crops to shift to the best adapted regions and most efficient farms and this is prevented by government controls. Flexible support prices, as provided by present law for 1950, are desirable as insurance against severe losses, but they are not a substitute for high demands from consumers employed at good wages."

During the present deflationary period Dean Myers recommended cautious, conservative operation as the soundest policy. The problem is to get an orderly downward readjustment of prices and costs by agriculture and other business to a basis on which the U. S. economy can move ahead with confidence.

He listed efficient, low-cost production as the first important factor in the maintenance of farm income. To individual farmers, as to other businessmen, this means reduce cash costs, increase efficiency and produce products desired by consumers. Among the former he cited increased output per man, higher yields through improved varieties, better use of fertilizers which are still the lowest cost item in farm production and more efficient methods of insect and disease control.

The second important bolster to farm income would be to provide an adequate diet for every consumer in the U. S. "This would not be a panacea but a desirable long-range program, and there would be little danger of

Supplying the NATION

We are in a position to supply any mixtures of soluble mineral salts, copper, manganese, zinc, iron, etc.

One of the nation's foremost producers of agricultural chemicals and soluble mineral salts.

For complete information, write the Tennessee Corporation, Grant Bldg, Atlanta, Ga. or Lockland, O.

•

COPPER SULPHATE

ZINC SULPHATE

MANGANESE SULPHATE

COPPER CARBONATE

•

TENNESSEE TC CORPORATION
Atlanta, Georgia — Lockland, Ohio

HEAVY DUTY MULTI-WALL

SHIPPING SACKS

OPEN-MOUTH
VALVE-TYPE
PASTED AND SEWN

KRAFT BAG CORPORATION

630 FIFTH AVE., NEW YORK 20, N.Y.
MILLS AT GILMAN, VT.

CONTACT SULPHURIC ACID
SUPER & TRIPLE PHOSPHATE

PLANTS & DESIGNS

NICOLAY TITLESTAD CORPORATION
11 West 42nd Street
New York 18, N. Y.

Miss Rita Bott

Miss Bott, who recently spent three months with Great Britain farming people, said that "English farmers certainly realize the advantages of the use of fertilizers and crop rotation" adding that "although they have been farming for centuries, they still get just as good production and even better in some sections, than we do."

One of 17 American youths assigned to visit cooperating countries in connection with the International Farm Youth Exchange Project, the young 4-H Club representative keynoted her talk with the conclusion that "if we will start as young people to learn to live, work and play together and can talk things over now, we can help build the foundations for a lasting world peace."

Miss Bott reported that British rural organizations, comparable to 4-H Clubs, were "developing along our methods and ideals, although they have been restricted because of their rationing, lack of money and materials," adding that "their attitude toward this restriction is amazing, for they feel they can accept the worst if it is for the good of their country."

"I was fortunate in getting to stay with people in England, Scotland and Wales and find that although each was different from one another, they all had the same love for their country and were trying to do their best job to get it back on its two feet again," she said.

"While staying on 14 farms I helped with the work as much as was allowed, particularly with the household duties and found that we certainly are a fortunate country to have all our conveniences, which we call necessities, such as washing machines and refrigerators that are considered luxuries by these people. I left their country feeling more appreciative of the things I have and of the fact that I live in America where democracy reigns."

Dr. W. I. Myers

Future farm prices and incomes will depend largely on the general level of prices, employment and production, not on agricultural programs, Dr. W. I. Myers stated in his address.

"No farmer or group of farmers has yet devised a way of increasing farm income by decreasing production," Dean Myers stated, and he emphasized that "we cannot have a prosperous agriculture unless the rest of the economy—our consumers—are prosperous. It is bad enough to have income lowered by declining prices, but if both prices and production decline the national economy is injured and farmers are not helped."

Dr. Myers expressed the opinion that it would be desirable to remove artificial stimulus of guaranteed prices at high levels with accompanying rigid governmental controls of production and marketing. The latter, he contends, are not the solution of the problem of farm readjustment. "Farmers need freedom to shift production to meet consumer demands. There should also be freedom to permit production of various crops to shift to the best adapted regions and most efficient farms and this is prevented by government controls. Flexible support prices, as provided by present law for 1950, are desirable as insurance against severe losses, but they are not a substitute for high demands from consumers employed at good wages."

During the present deflationary period Dean Myers recommended cautious, conservative operation as the soundest policy. The problem is to get an orderly downward readjustment of prices and costs by agriculture and other business to a basis on which the U. S. economy can move ahead with confidence.

He listed efficient, low-cost production as the first important factor in the maintenance of farm income. To individual farmers, as to other businessmen, this means reduce cash costs, increase efficiency and produce products desired by consumers. Among the former he cited increased output per man, higher yields through improved varieties, better use of fertilizers which are still the lowest cost item in farm production and more efficient methods of insect and disease control.

The second important bolster to farm income would be to provide an adequate diet for every consumer in the U. S. "This would not be a panacea but a desirable long-range program, and there would be little danger of

L. W. HUBER COMPANY
Brokers Fertilizer Materials
Room 903
170 BROADWAY
NEW YORK 7, N.Y.

TC

Supplying the
NATION

We are in a position to supply any mixtures of soluble mineral salts, copper, manganese, zinc, iron, etc.

One of the nation's foremost producers of agricultural chemicals and soluble mineral salts.

For complete information, write the Tennessee Corporation, Grant Bldg, Atlanta, Ga. or Lockland, O.

•

COPPER SULPHATE

ZINC SULPHATE

MANGANESE SULPHATE

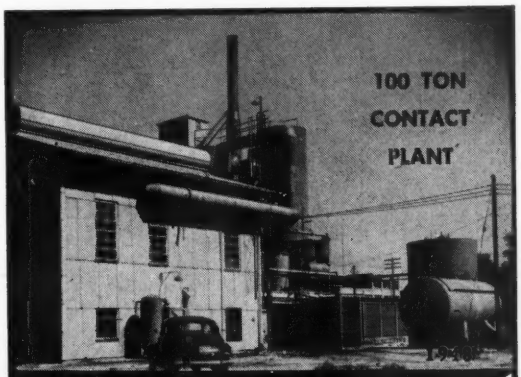
COPPER CARBONATE

•

TENNESSEE TC CORPORATION
Atlanta, Georgia — Lockland, Ohio

HEAVY DUTY MULTI-WALL
SHIPPING SACKS
OPEN-MOUTH
VALVE-TYPE
PASTED AND SEWN

KRAFT BAG CORPORATION
630 FIFTH AVE., NEW YORK 20, N.Y.
MILLS AT GILMAN, VT.



CONTACT SULPHURIC ACID
SUPER & TRIPLE PHOSPHATE
PLANTS & DESIGNS

NICOLAY TITLESTAD CORPORATION
11 West 42nd Street
New York 18, N. Y.

general overproduction if our own market was really developed," the Cornell Dean said. "Such a long-range program should include educational and advertising activities to teach all consumers the importance of a good diet for health, happiness and welfare, federal and state support for school lunches on a permanent basis, and public aid for low income families to enable them to buy needed foods. This should be a permanent plan which could be expanded if a depression should occur."

Dean Myers interpreted the piecemeal adjustments in individual industries and crops that have occurred so far as meaning that the Nation may be able to get down to a sounder basis without a smashup. The outcome is unpredictable but he doesn't see a severe drop soon unless there is a world-wide break in commodity prices. There has been some softening but no real break yet.

In spite of the troubled outlook for the next few years, the Cornell Dean was optimistic about the long-run prospects for agriculture. To provide 150 million people in the U. S. with the present per capita diet will take about all that American farms are now producing with no allowance for substantial food exports except moderate amounts of wheat, lard and vegetable oils and some fruit if Europe can afford it. As population increases during the next 10 years, still higher production will be needed, or more imports or a less desirable diet. In addition, Western Europe will need large food imports even after full recovery. Dean Myers explained that the principal way of obtaining increased food production in the next decade is by higher yields from land already in use. "This goal is attainable if vigorous programs of research are continued and if these improved practices are put promptly into use by farmers."

Annual Banquet, June 21st

The annual dinner of the Council was held on the evening of June 21st. President Woodrum presided and, after the introduction of distinguished guests, presented the speaker of the evening, Representative Harold D. Cooley, chairman of the House Agriculture Committee.

"No real friend of the farmer has advocated or will advocate high price supports of unlimited production of any agricultural commodity" said Mr. Cooley and he described the present farm program as "an incentive to produce the abundance demanded under an economy emphasizing an increasingly higher standard of living."

"The current price support program is not the result of greed on the part of the farmer and it was not provided in the interest of the farmer alone," he said. "The program, to be sure, is a protection to the farmer and a great benefit to him, yet at the same time it provides an incentive to produce an abundance which otherwise might not be produced. No official of the Government has a right to invoke a program of scarcity. Farmers and consumers alike will insist upon a sound farming economy geared to an economy of abundance."

Representative Cooley, further defending the Nation's agricultural price support policies, emphasized that "the farm price program puts a limited floor under the price of farm commodities just as the minimum wage puts a floor under the wages of labor."

He called upon business and industrial leaders "interested in the welfare of agriculture" to "help educate the public to the end that consumers might know that the farmers are constantly being called upon to produce an abundance of the things which the consumers of the nation want and need." He added that "although the legislative branch of the government was in the hands and under the control of a different political party, not a single vital part or parcel of the farm program which has been written in the past 16 years was repealed or abandoned."

The House Agriculture Committee chairman said that "actually, America's agricultural problem number one is summed up in the one word 'surplus'," which he attributed to "a woeful lacking in the techniques of proper distribution."

"Trained in the arts of agriculture, the American farmer can teach the world the skills of production, but apparently we can tell the world little about how to distribute the products of our toil," he said. "Only by intelligent planning will we be able to avoid an agricultural disaster here at home. With

SOUTHERN STATES PHOSPHATE and FERTILIZER COMPANY
SAVANNAH, GEORGIA
Manufacturers of
SULPHURIC ACID, SUPERPHOSPHATE, COMPLETE FERTILIZERS
and ALL TYPES OF BASE GOODS
EXPORT ORDERS SOLICITED

THE DAVIDSON COMMISSION CO.
BROKERS

TALLOWS—GREASES—STEARINES
FERTILIZER AND ANIMAL FEED MATERIALS
VEGETABLE OILS—ANIMAL OILS
FATTY ACIDS—FISH OIL AND FISH MEAL
ANIMAL GLANDS AND GLANDULAR DERIVATIVES

Telephone
WABASH 2604

UTILITIES BUILDING—327 SOUTH LA SALLE STREET
CHICAGO 4, ILL.

Codes Used
ROBINSON
CROSS
KELLY-YOPP
TELETYPE CGO 1051

Call for Fulton!

FOR QUALITY BAGS

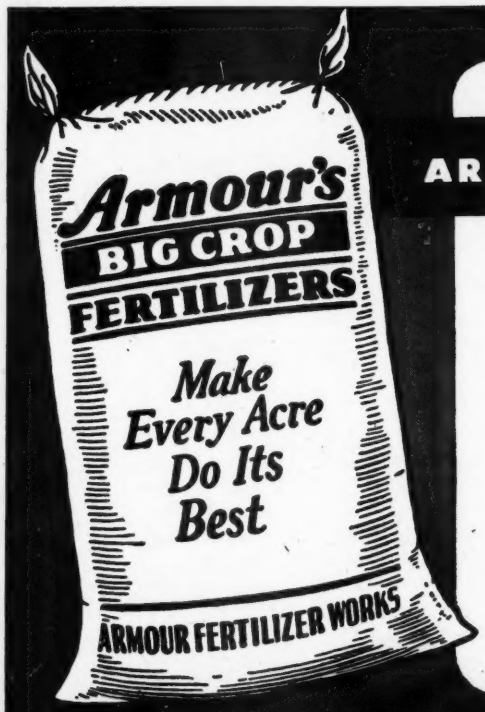
Burlap and Cotton Bags
Waterproof Paper Lined Textile Bags
Multiwall Paper Bags
Eagle Sail Cotton Twine

Fulton
BAG & COTTON MILLS
Atlanta • St. Louis • Dallas
Kansas City (Kans.) • New
York • Minneapolis • New
Orleans • Denver • Los Angeles

KENT MILL COMPANY
60 BOWNE ST., BROOKLYN 31, N. Y.

CRUSHING, GRINDING, PULVERIZING,
AND AIR SEPARATING MACHINERY.

FOR
LIMESTONE, GYPSUM, BARYTES, PHOSPHATE
ROCK AND OTHER MATERIALS



ARMOUR FERTILIZER WORKS

General offices: HURT BUILDING
ATLANTA, GA.

MAILING ADDRESS: P.O. BOX 1685, ATLANTA 1, Ga.

Division offices:

Birmingham, Ala.
Montgomery, Ala.
Jacksonville, Fla.
Albany, Ga.
Atlanta, Ga.
Augusta, Ga.
Columbus, Ga.
Chicago Heights, Ill.
East St. Louis, Ill.
New Orleans, La.
Presque Isle, Me.
Baltimore, Md.
New York, N. Y.
Greensboro, N. C.
Wilmington, N. C.
Cincinnati, Ohio
Sandusky, Ohio
Columbia, S. C.
Nashville, Tenn.
Houston, Tex.
Norfolk, Va.
Havana, Cuba

San Juan, Puerto Rico

the harvesting of another record-breaking crop in 1949, our own agricultural economy may give way and be crushed beneath the devastating surpluses which may be harvested from our fields. We cannot let these surplusses go unused by the human family and be permitted to rot and decay while the hungry and the naked of the world look on and point the finger of scorn at our great republic—a republic not only with responsibility to its own citizens but with appreciation of the needs of the starving of other lands."

Raising the question as to whether the world could feed itself, Representative Cooley said "the answer is yes, if the world will feed itself," adding that "the techniques of modern science and the storehouse of information gathered through the years by past research on more efficient methods of distribution must be put to use by larger segments and on a broadened basis" and "we must have a widespread use of improved technology and a better understanding of the varieties of life."

Viewing the Nation's assistance in European rehabilitation, Mr. Cooley said "a more generous program could not be conceived and yet if we strip it of all sentiment and all its humanitarian appeals and value it in cold cash, we must conclude that we are making a good investment in the future security of our Nation and in the future cpace of the world."

He paid tribute to the American agriculture which he said "did its part in war and is doing its part in peace," but warned that "we must be constantly aware that the Nation's richest resource is the top soil of our farm land upon which depends the stability of our entire economy," adding that "the fertility of our soils must be maintained, replenished and increased."

"Manufacturers of fertilizer are rendering an essential service in making available the plant foods so important to a sound agricultural system embodying well-rounded land management practices," he added. "I congratulate you upon the spectacular and magnificent record which you made during the war and which you have continued in the postwar period."

Commenting upon a House Agriculture Sub-committee report just released on the prospects of fertilizer supplies, the House agriculture spokesman said:

"Those of us in Congress concerned with agriculture's future have appraised the industry's ability and operations in the light of farmers' fertilizer demands. Amid threats of Government competition, the industry expressed confidence in its ability to meet the plant food demands of farmers if given a fair opportunity and I was among those who shared your faith in our competitive, private enterprise system. Subsequent production achievements have shown that my confidence was not misplaced."

What 4-H Club Work Means to Me

(Continued from page 11)

The 4-H Club program not only emphasizes the importance of conservation of our soil resources and other important factors in a sound land management program but club work prepares young men and women to become leaders in the field of agriculture. Perhaps two of my most valuable honors came as State Boys' 4-H Club leadership winner in 1947 and as State Citizenship Winner.

In addition to the leadership and social sides of Club work, "learning by doing" provides some financial returns and in my case $15,000.00 during my 8 years in 4-H work. Not least are the 4 college scholarships amounting to $450.00 and the $525.00 won in public speaking contests.

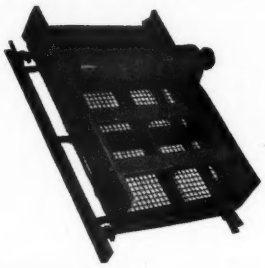
However, the ideals that 4-H fosters mean more to me than the monetary value of my projects. I have learned to know and appreciate the things of nature around me in which I am daily immersed. Garden projects and field crop projects have taught me a greater kinship with the earth and a deeper appreciation of the miracles wrought with a handful of soil. My life has been enriched by enduring friendships with other young people. Spiritually, I have been drawn into closer relationship with nature and my Maker because of the guidance given me at the 4-H camps that I have attended. Physically, I am stronger because 4-H has impressed upon me the importance of proper diet and correct health habits. I know that 4-H Club work has made me a "Better Citizen for a Better World."

FELIX KRAMARSKY CORPORATION

FERTILIZERS

39 Broadway, New York 6, N. Y.

UNIVERSAL VIBRATING SCREENS



- High-speed vibratory action
- Clean, accurate sizing
- Economical in first cost and maintenance

A wide range of models to fit your requirements. Write today for Catalog No. 109

UNIVERSAL VIBRATING SCREEN CO.
RACINE-WISCONSIN

A POPULAR ORGANIC CONDITIONER

FUR-AG is an inexpensive organic conditioner. It speeds up curing in the pile, helps prevent mixed goods from caking, and provides bulk. Heated to 350° F for several hours in the presence of small amounts of steam and acid, FUR-AG is freed from plant diseases, insects, seeds, and other similar contaminants. It is being used by leading fertilizer manufacturers. FUR-AG is produced and available in volume the year around. More complete information on request.

The Quaker Oats Company
CHEMICALS DEPARTMENT
1885 Board of Trade Bldg.
141 West Jackson Blvd. Chicago 4, Illinois

Alex. M. McIver & Son
BROKERS

Specializing
SULPHURIC ACID
Nitrogenous Materials
Castor Pomace
Phosphate Rock
"Riceland" Ground Rice Hulls
Representatives
Arkansas Rice Growers Coop. Ass'n
Bags
Ammoniated Base and Superphosphate
Dolomitic Lime
(42-44% Magnesium Carbonate)
Oil Mill Products

PEOPLES OFFICE BUILDING
Charleston South Carolina
Phones: 2-4627—L.D. 921—922

TRIPLE SUPERPHOSPHATE
46 to 48% Available Phosphoric Acid

•

We also manufacture
20% SUPERPHOSPHATE

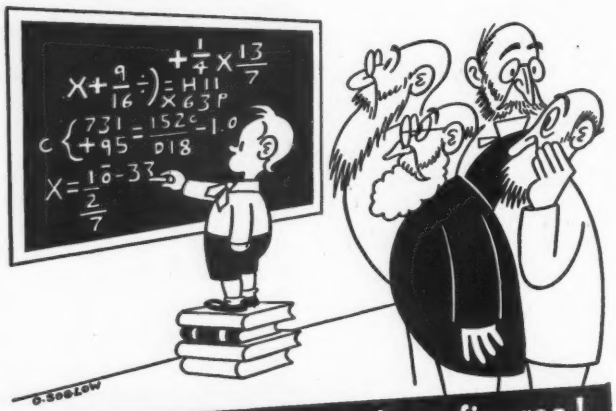
•

U. S. Phosphoric Products
Division
TENNESSEE CORPORATION
Tampa, Florida

New York Office:
61 Broadway

Sales Agents:
Bradley & Baker
155 East 44th St.
New York, N. Y.

A Mark of Reliability



You'll be surprised at these figures!

- 80 million Americans own $48 billion of U.S. Savings Bonds.
- 20,000 of the nation's 38,000 firms employing 100 or more persons are operating Payroll Savings Plans.
- 7,500,000 workers are buying an individual average of $20 of Bonds per month.
- For the year 1948, sales of Series E Bonds exceeded redemptions by $495,148,000. The net figure for all Series after redemptions and maturities was $2,151,140,000.

What does all this mean to you? Well, it means first of all that your Treasury Department is successful in its program of increasing the nation's economic security by spreading the national debt. Secondly it means that most of the nation's business leaders recognize the value of the Payroll Savings Plan sufficiently to promote it within their companies.

We all know how buying Bonds builds an individual's future security. But there are *company* benefits too! Nation-wide experience shows that Payroll Savings increases each participating employee's peace of mind—makes him a more contented, more productive worker. It reduces absenteeism, lowers accident rates, increases output, and improves employee-employer relations.

Nation-wide experience indicates that 50% of your employees can be persuaded to join—without high-pressure selling. All the help you need is available from your State Director, U. S. Treasury Department, Savings Bonds Division. While it's on your mind, why not call him right now? Or write the Treasury Department, Washington 25, D. C.

The Treasury Department acknowledges with appreciation the publication of this message by

THE AMERICAN FERTILIZER

This is an official U. S. Treasury advertisement prepared under the auspices of the Treasury Department and The Advertising Council.

BUYERS' GUIDE • A CLASSIFIED INDEX TO ALL THE ADVERTISERS IN "THE AMERICAN FERTILIZER"

AMMONIA—Anhydrous and Liquor
Commercial Solvents Corp., New York City
Lion Oil Co. El Dorado, Ark.
Spencer Chemical Co., Kansas City, Mo.

AMMONIUM NITRATE
Lion Oil Co., El Dorado, Ark.
Spencer Chemical Co., Kansas City, Mo.

BAG MANUFACTURERS—BURLAP
Bemis Bros. Bag Co., St. Louis, Mo.
Chase Bag Co., Chicago, Ill.
Fulton Bag & Cotton Mills, Atlanta, Ga.
Virginia-Carolina Chemical Corp., Richmond, Va.

BAG MANUFACTURERS—Cotton
Bemis Bro. Bag Co., St. Louis, Mo.
Chase Bag Co., Chicago, Ill.
Fulton Bag & Cotton Mills, Atlanta, Ga.
Virginia-Carolina Chemical Corp., Richmond, Va.

BAG MANUFACTURERS—Paper
Bemis Bro. Bag Co., St. Louis, Mo.
Chase Bag Co., Chicago, Ill.
Fulton Bag & Cotton Mills, Atlanta, Ga.
Hammond Bag & Paper Co., Welisburg, W. Va.
International Paper Co., Bagpak Div., New York City
Jaite Company, The, Jaite, Ohio
Kraft Bag Corporation, New York City
Raymond Bag Co., Middletown, Ohio
St. Regis Paper Co., New York City

BAGS—Dealers and Brokers
Ashcraft-Wilkinson Co., Atlanta, Ga.
Huber & Company, New York City
McIver & Son, Alex. M., Charleston, S. C

BAG CLOSING MACHINES
International Paper Co., Bagpak Div., New York City
St. Regis Paper Co., New York City

BAG PRINTING MACHINES
Schmutz Mfg. Co., Louisville, Ky.

BAGGING MACHINES—For Filling Sacks
Atlanta Utility Works, The, East Point, Ga.
St. Regis Paper Co., New York City
Sackett & Sons Co., The A. J., Baltimore, Md.
Sturtevant Mill Company, Boston, Mass.

BONE PRODUCTS—BONE BLACK
American Agricultural Chemical Co., New York City
Armour Fertilizer Works, Atlanta, Ga.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City
Davidson Commission Co., The, Chicago, Ill.
Huber & Company, New York City
Jackle, Frank R., New York City
McIver & Son, Alex M., Charleston, S. C.
Scar-Lipman & Co., New York City
Woodward & Dickerson, Inc., Philadelphia, Pa.

BORAX AND BORIC ACID
American Potash and Chem. Corp., New York City

BROKERS
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City
Davidson Commission Co., The, Chicago, Ill.
Huber & Company, New York City
Jackle, Frank R., New York City
Keim, Samuel D., Philadelphia, Pa.
McIver & Son, Alex. M., Charleston, S. C.
Scar-Lipman & Co., New York Cjiy
Woodward & Dickerson, Inc., Philadelphia, Pa.

BUCKETS—For Hoists, Cranes, etc.
Hayward Company, The, New York City

BUCKETS—Elevator
Baughman Manufacturing Co., Jerseyville, Ill.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

CARS AND CARTS
Atlanta Utility Works, The, East Point, Ga.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

CHEMICALS
American Agricultural Chemical Co., New York Cit
Armour Fertilizer Works, Atlanta, Ga.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City
Commercial Solvents Corp., New York City
Davison Chemical Corporation, Baltimore, Md.
Huber & Company, New York City
International Minerals & Chemical Corporation, Chi.
Lion Oil Company, El Dorado, Ark.
McIver & Son, Alex. M., Charleston, S. C.
Scar-Lipman & Co., New York City
Spencer Chemical Co., Kansas City, Mo.
Virginia-Carolina Chemical Corp., Richmond, Va.
Woodward & Dickerson, Inc., Philadelphia, Pa.

CHEMISTS AND ASSAYERS
Gascoyne & Co., Baltimore, Md.
Shuey & Company, Inc., Savannah, Ga.
Wiley & Company, Baltimore, Md.

CONDITIONERS
Jackle, Frank R., New York City
Keim, Samuel D., Philadelphia, Pa.
National Lime & Stone Co., Findlay, Ohio
Quaker Oats Company, Chicago, Ill.

COTTONSEED PRODUCTS
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City
Huber & Company, New York City
Jackle, Frank R., New York City
McIver & Son, Alex. M., Charleston, S. C.
Scar-Lipman & Co., New York City
Woodward & Dickerson, Inc., Philadelphia, Pa.

CYANAMID
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City

DRYERS
Sackett & Sons Co., The A. J., Baltimore, Md.

ENGINEERS—Chemical and Industrial
Chemical Construction Corp., New York City
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind
Sturtevant Mill Company, Boston, Mass.
Titlestad Corporation, Nicolay, New York City

FERTILIZER (Mixed) MANUFACTURERS
American Agricultural Chemical Co., New York City
Armour Fertilizer Works, Atlanta, Ga.
Davison Chemical Corporation, Baltimore, Md.
International Minerals & Chemical CorporationChicago
Southern States Phosphate & Fertilizer Co., Savannah, Ga
Virginia-Carolina Chemical Corp., Richmond, Va.

FISH SCRAP AND OIL
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City
Huber & Company, New York City
Jackle, Frank R., New York City
McIver & Son, Alex. M., Charleston, S. C.
Scar-Lipman & Co., New York City
Woodward & Dickerson, Inc., Philadelphia, Pa.

FOUNDERS AND MACHINISTS
Atlanta Utility Works, The, East Point, Ga.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Machine Works, Aurora, Ind.

A Classified Index to Advertisers in "The American Fertilizer"

BUYERS' GUIDE

For an Alphabetical List of all the Advertisers, see page 37

HOPPERS
Atlanta Utility Works, The, East Point, Ga.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.
Sturtevant Mill Company, Boston, Mass.

IMPORTERS, EXPORTERS
Armour Fertilizer Works, Atlanta, Ga.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City
Scar-Lipman & Co., New York City
Southern States Phosphate & Fertilizer Co., Savannah, Ga.
Woodward & Dickerson, Inc., Philadelphia, Pa.

INSECTICIDES
American Agricultural Chemical Co., New York City

LEAD BURNERS
Southern Lead Burning Co., Atlanta, Ga.

LIMESTONE
American Agricultural Chemical Co., New York City
Ashcraft-Wilkinson Co., Atlanta, Ga.
McIver & Son, Alex. M., Charleston, S. C.
National Lime & Stone Co., Findlay, Ohio

LOADERS—Car and Wagon
Sackett & Sons Co., The A. J., Baltimore, Md.

MACHINERY—Acid Making and Handling
Atlanta Utility Works, The, East Point, Ga.
Chemical Construction Corp., New York City
Monarch Mfg. Works, Inc., Philadelphia, Pa.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

MACHINERY—Ammoniating
Sackett & Sons Co., The A. J., Baltimore, Md.
Sturtevant Mill Company, Boston, Mass.

MACHINERY—Grinding and Pulverizing
Atlanta Utility Works, The, East Point, Ga.
Bradley Pulverizer Co., Allentown, Pa.
Kent Mill Co., Brooklyn, N. Y.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.
Sturtevant Mill Company, Boston, Mass.

MACHINERY—Material Handling
Atlanta Utility Works, The, East Point, Ga.
Baughman Manufacturing Co., Jerseyville, Ill.
Hayward Company, The, New York City
Power Production Co., Chicago, Ill.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.
Sturtevant Mill Company, Boston, Mass.

MACHINERY—Mixing, Screening and Bagging
Atlanta Utility Works, The, East Point, Ga.
Sackett & Sons Co., The A. J., Baltimore Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.
Sturtevant Mill Company, Boston, Mass.
Universal Vibrating Screen Co., Racine, Wis.

MACHINERY—Power Transmission
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

MACHINERY—Superphosphate Manufacturing
Atlanta Utility Works, The, East Point, Ga.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.
Sturtevant Mill Company, Boston, Mass.

MANGANESE SULPHATE
McIver & Son, Alex. M., Charleston, S. C.

MINOR ELEMENTS
Tennessee Corporation, Atlanta, Ga.

MIXERS
Atlanta Utility Works, The, East Point, Ga.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.
Sturtevant Mill Company, Boston, Mass.

NITRATE OF SODA
American Agricultural Chemical Co., New York City
Armour Fertilizer Works, Atlanta, Ga.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City
Huber & Company, New York City
International Minerals & Chemical Corporation, Chicago, Ill.
McIver & Son, Alex. M., Charleston, S. C.
Scar-Lipman & Co. New York City

NITROGEN SOLUTIONS
Lion Oil Company, El Dorado, Ark.
Spencer Chemical Co., Kansas City, Mo.

NITROGENOUS ORGANIC MATERIAL
American Agriculture Chemical Co., New York City
Armour Fertilizer Works, Atlanta, Ga.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City
Davidson Commission Co., The, Chicago, Ill.
Huber & Company, New York City
International Minerals & Chemical Corporation, Chicago, Ill.
Jackle, Frank R., New York City
McIver & Son, Alex. M., Charleston, S. C.
Scar-Lipman & Co., New York City
Woodward & Dickerson, Inc., Philadelphia, Pa.

NOZZLES—Spray
Monarch Mfg. Works, Philadelphia, Pa.

PHOSPHATE ROCK
American Agricultural Chemical Co., New York City
Armour Fertilizer Works, Atlanta, Ga.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City
Huber & Company, New York City
International Minerals & Chemical Corporation, Chicago, Ill.
McIver & Son, Alex. M., Charleston, S. C.
Virginia-Carolina Chemical Corp., Richmond, Va.

PLANT CONSTRUCTION—Fertilizer and Acid
Atlanta Utility Works, The, East Point, Ga.
Chemical Construction Corp., New York City
Monsanto Chemical Co., St. Louis, Mo.
Sackett & Sons Co., The A. J., Baltimore, Md.
Southern Lead Burning Co., Atlanta, Ga.
Stedman's Foundry and Mach. Works, Aurora, Ind.
Sturtevant Mill Company, Boston, Mass.
Titlestad Corporation, Nicolay, New York City

POTASH SALTS—Dealers and Brokers
American Agricultural Chemical Co., New York City
Armour Fertilizer Works, Atlanta, Ga.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City
Huber & Company, New York City
International Minerals & Chemical Corporation, Chicago, Ill.
Jackle, Frank R., New York City
Scar-Lipman & Co., New York City

POTASH SALTS—Manufacturers
American Potash and Chem. Corp., New York City
Potash Co. of America, New York City
International Minerals & Chemical Corporation, Chicago, Ill.
United States Potash Co., New York City

PRINTING PRESSES—Bag
Schmutz Mfg. Co., Louisville, Ky.

REPAIR PARTS AND CASTINGS
Atlanta Utility Works, The, East Point, Ga.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

SCALES—Including Automatic Bagging
Atlanta Utility Works, The, East Point, Ga.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.

BUYERS' GUIDE

SCREENS
Atlanta Utility Works, The, East Point, Ga.
Sackett & Sons Co., The A. J., Baltimore, Md.
Stedman's Foundry and Mach. Works, Aurora, Ind.
Sturtevant Mill Company, Boston, Mass.
Universal Vibrating Screen Co., Racine, Wis.

SEPARATORS—Air
Kent Mill Co., Brooklyn, N. Y.
Sackett & Sons Co., The A. J., Baltimore, Md.
Sturtevant Mill Co., Boston, Mass.

SPRAYS—Acid Chambers
Monarch Mfg. Works, Inc., Philadelphia, Pa.

SULPHATE OF AMMONIA
American Agricultural Chemical Co., New York City
Armour Fertilizer Works, Atlanta, Ga.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City
Huber & Company, New York City
Jackle, Frank R., New York City
Lion Oil Co., El Dorado, Ark.
McIver & Son, Alex. M., Charleston, S. C.
Scar-Lipman & Co., New York City
Woodward & Dickerson, Inc., Philadelphia, Pa.

SULPHUR
Ashcraft-Wilkinson Co., Atlanta, Ga.

SULPHURIC ACID
American Agricultural Chemical Co., New York City
Armour Fertilizer Works, Atlanta, Ga.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City
Huber & Company, New York City
International Minerals & Chemical Corporation, Chicago, Ill.
McIver & Son, Alex. M., Charleston, S. C.
Scar-Lipman & Co., New York City
Southern States Phosphate Fertilizer Co., Savannah, Ga.
U. S. Phosphoric Products Division, Tenne Corp., Tampa, Fla.
Virginia-Carolina Chemical Corp., Richmond, Va.

SUPERPHOSPHATE
American Agricultural Chemical Co., New York City
Armour Fertilizer Works, Atlanta, G.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City
Davison Chemical Corporation, Baltimore, Md.
Huber & Company, New York City
International Minerals & Chemical Corporation, Chicago, Ill.
Jackle, Frank R., New York City
Scar-Lipmon & Co., New York City
Southern States Phosphate Fertilizer Co., Savannah, Ga.
U. S. Phosphoric Products Division, Tennessee Corp., Tampa, Fla.
Virginia-Carolina Chemical Corp., Richmond, Va.

SUPERPHOSPHATE—Concentrated
Armour Fertilizer Works, Atlanta, Ga.
International Minerals & Chemical Corporation, Chicago, Ill.
U. S. Phosphoric Products Division, Tennessee Corp., Tampa, Fla.
Virginia-Carolina Chemical Corp., Richmond, Va.

TAGS
Keener Mfg. Co., Lancaster, Pa.

TANKAGE
American Agricultural Chemical Co., New York City
Armour Fertilizer Works, Atlanta, Ga.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City
Davidson Commission Co., The, Chicago, Ill.
International Minerals & Chemical Corporation, Chicago, Ill.
Jackle, Frank R., New York City
McIver & Son, Alex. M., Charleston, S. C.
Scar-Lipman & Co., New York City
Woodward & Dickerson, Inc., Philadelphia, Pa.

VALVES
Atlanta Utility Works, The, East Point, Ga.
Monarch Mfg. Works, Inc., Philadelphia, Pa.

Alphabetical List of Advertisers

American Agricultural Chemical Co., New York City 4
American Potash and Chemical Corp., New York City 21
Armour Fertilizer Works, Atlanta, Ga. 27
Ashcraft-Wilkinson Co., Atlanta, Ga. ..... Front Cover
Atlanta Utility Works, The, East Point, Ga. ..... —
Baker & Bro., H. J., New York City ..... —
Baughman Mfg. Co., Jerseyville, Ill. ..... —
Bemis Bro. Bag Co., St. Louis, Mo. ..... 2nd Cover
Bradley Pulverizer Co., Allentown, Pa. ..... —
Chemical Construction Corp., New York City. ..... —
Commercial Solvents Corp., Agricultural Div., New York City ..... —
Davidson Commission Co., The, Chicago Ill. 27
Fulton Bag & Cotton Mills, Atlanta, Ga. 27
Gascoyne & Co., Inc., Baltimore, Md. 34
Hammcnd Bag & Paper Co., Wellsburg, W. Va. 23
Hayward Company, The, New York City 34
Huber Co., L. W., New York City 24
International Minerals & Chemical Corporation, Chicago, Ill. ..... Back Cover
International Paper Co., Bagpak Div., New York City ..... —
Jaite Company, The Jaite, Ohio 16
Jackle, Frank R., New York City 14
Keener Mfg. Co., Lancaster, Pa. 34
Keim, Samuel D., Philadelphia, Pa. 33
Kent Mill Co., Brooklyn, N. Y. 27
Kraft Bag Corporation, New York City 25
Kramarsky Corp., Felix, New York City 28
Lion Oil Company, El Dorado, Ark. ..... —
McIver & Son, Alex. M., Charleston, S. C. 29
Monarch Mfg. Works, Inc., Philadelphia, Pa. 34
Monsanto Chemical Co., St. Louis, Mo. 17
National Lime & Stone Co., Findlay, Ohio 23
Potash Co. of America, New York City. ..... 3rd Cover
Power Production Co., Chicago, Ill. 6
Quaker Oats Company, Chicago, Ill. 29
Raymond Bag Co., Middletown, Ohio ..... —
Sackett & Sons Co., The A. J., Baltimore, Md. ..... —
Scar-Lipman & Co., New York City 20
Schmutz Mfg. Co., Louisville, Ky. 5
Shuey & Company, Inc., Savannah, Ga. 34
Southern Lead Burning Co. Atlanta, Ga. ..... —
Southern States Phosphate & Fertilizer Co., Savannah, Ga. 26
Stedman's Foundry and Machine Works, Aurora, Ind. 22
St. Regis Paper Co., New York City 19
Tennessee Corporation, Atlanta, Ga. 25
Texas Gulf Sulphur Co., New York City ..... —
Titlestad Corporation, Nicolay, New York City 25
U. S. Phosphoric Products Division, Tennessee Corp., Tampa, Fla. 29
United States Potash Co., New York City 3
Universal Vibrating Screen Co., Racine, Wis. 29
Virginia-Carolina Chemical Corp., Richmond, Va. ..... —
Wiley & Company, Inc., Baltimore, Md. 34
Woodward & Dickerson Inc., Philadephia, Pa. 18

FEEDING AND FERTILIZER MATERIALS

(SINCE 1898)

SAMUEL D. KEIM

1343 ARCH STREET

PHILADELPHIA 7, PA.

MONARCH SPRAYS

This is our Fig. 645 Nozzle. Used for Scrubbing Acid Phosphate Gases. Made for "full" or "hollow" cone in Brass and "Everdur." We also make "Non-Clog" Nozzles in Brass and Steel, and

Stoneware Chamber Sprays

now used by nearly all chamber spray sulphuric acid plants.

CATALOG 6-C

MONARCH MFG. WORKS, INC.
2501 East Ontario St., Philadelphia, Pa.

HAYWARD BUCKETS

Use this Hayward Class "K" Clam Shell for severe superphosphate digging and handling.

THE HAYWARD CO., 202 Fulton St., New York

GASCOYNE & CO., INC.
Established 1887
Chemists and Assayers
Public Weighers and Samplers
27 South Gay Street - BALTIMORE, MD.

SHUEY & COMPANY, Inc.

Specialty: Analysis of Fertilizer Materials and Phosphate Rock. Official Chemists for Florida Hard Rock Phosphate Export Association. Official Weigher and Sampler for the National Cottonseed Products Association at Savannah; also Official Chemists for National Cottonseed Products Association
115 E. BAYSTREET, SAVANNAH, GA.

KEENER MFG. CO., TAG MAKERS
438 Lancaster Ave., LANCASTER, PA.

WILEY & COMPANY, Inc.
Analytical and Consulting Chemists
BALTIMORE 2, MD.

Dictionary of Fertilizer Materials and Terms

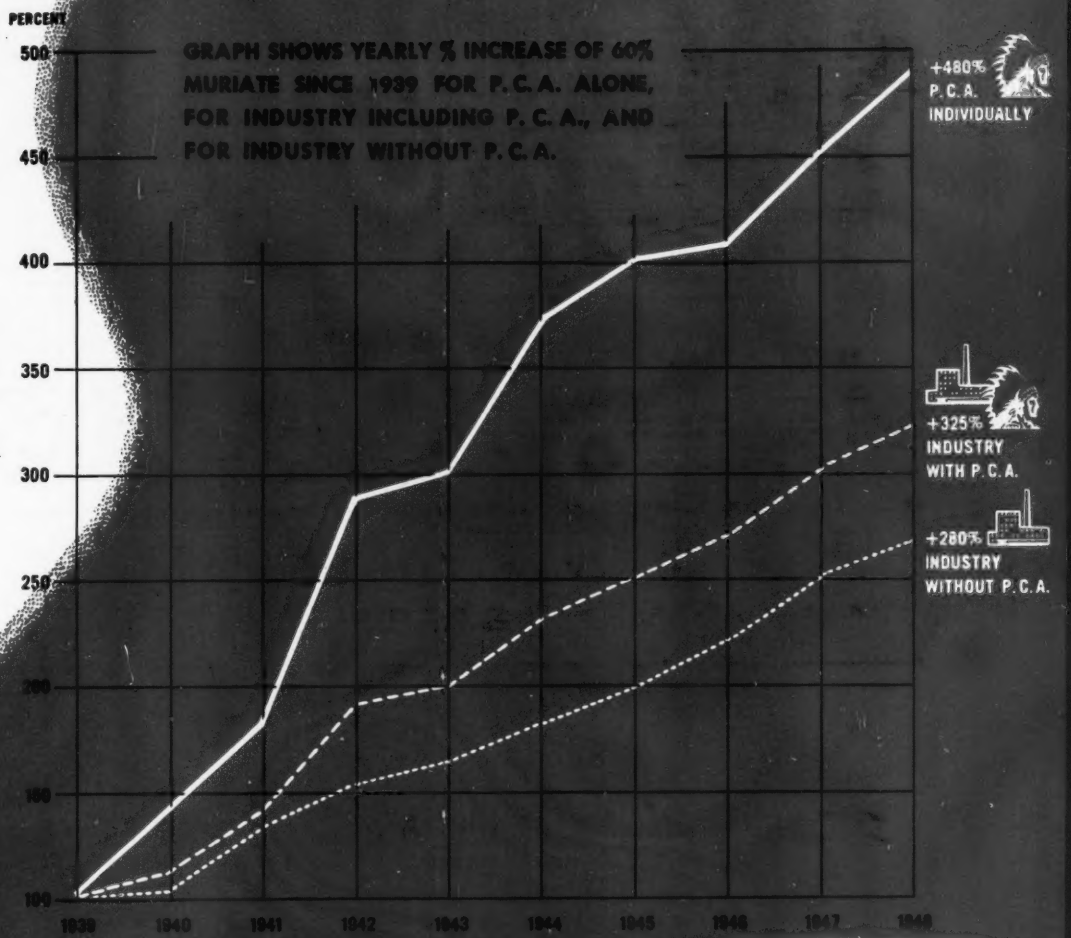
A new revised edition containing complete descriptions and analyses, together with A. O. A. C. official definitions, of all plant foods and materials used in the manufacture of chemical fertilizers.

The new edition is enlarged in content and size—6 x 9 inches. As a reference booklet for all who are interested in the manufacture or use of chemical fertilizers, the dictionary will prove invaluable. For the agricultural chemist as well as the fertilizer salesman, it will serve as an authoritative source of information that will give quick and accurate answers to questions that arise daily.

PRICE **$1.00** *postpaid*

WARE BROS. COMPANY
317 N. BROAD STREET
PHILADELPHIA 7, PA.

We've been doing some figuring...



1948 was a record year for domestic Potash. Using '39 as a base, the industry—not including P.C.A.—showed an increase of 280% in 60% Muriate. P.C.A. production lifts the industry increase to 325%. ***P.C.A. alone shows a High Grade Muriate increase for the same period of 480%.***

95% of all P.C.A.'s '48 deliveries were in the form of 60% Muriate. Our new $4,000,000 production and refining facilities now are operating. Our deliveries for '49-'50 will break all previous records. In fact, P.C.A.'s production capacity for 60% Muriate this year will exceed by some 150,000 tons the entire potash consumption — all grades — of the nation ten years ago.

These figures are graphic evidence of the leadership P.C.A. has won . . . leadership in volume, in economy to you and to agriculture.

P.C.A.
SALT of the EARTH
RED MURIATE

Potash Company of America
Carlsbad, New Mexico

GENERAL SALES OFFICE . . 50 Broadway, New York, N. Y. • MIDWESTERN SALES OFFICE . . First National Bank Bldg., Peoria, Ill
SOUTHERN SALES OFFICE . . Candler Building, Atlanta, Ga.

Farmers don't <u>always</u> get results like this when they use fertilizers containing . . .

INTERNATIONAL POTASH

You obviously couldn't promise your farm customers that when they use fertilizers containing *International Potash* they will grow corn as big as the gentleman from Iowa claims that he got.

You *can* assure them that by using quality plant foods they can expect to get large yields and fine quality in the growth of a wide variety of food and fiber crops.

Many fertilizer manufacturers use *International Potash* regularly because they know from experience that it helps them produce the quality and grades of fertilizer which their farm customers want for a wide variety of crops.

International Potash, mined and refined at Carlsbad, New Mexico, is available now in larger tonnages than ever before and in the grades and quality you want. You'll like its clean dry crystals, free-flowing characteristics and workability which mean greater economy and speed in your manufacturing operations.

SUL-PO-MAG (Water-Soluble Double Sulfate of Potash-Magnesia)
MURIATE OF POTASH • SULFATE OF POTASH

Sul-Po-Mag Trademark Reg. U. S. Pat. Off.

POTASH DIVISION • INTERNATIONAL MINERALS & CHEMICAL International Minerals & Chemicals **CORPORATION**

GENERAL OFFICES: 20 NORTH WACKER DRIVE, CHICAGO 6